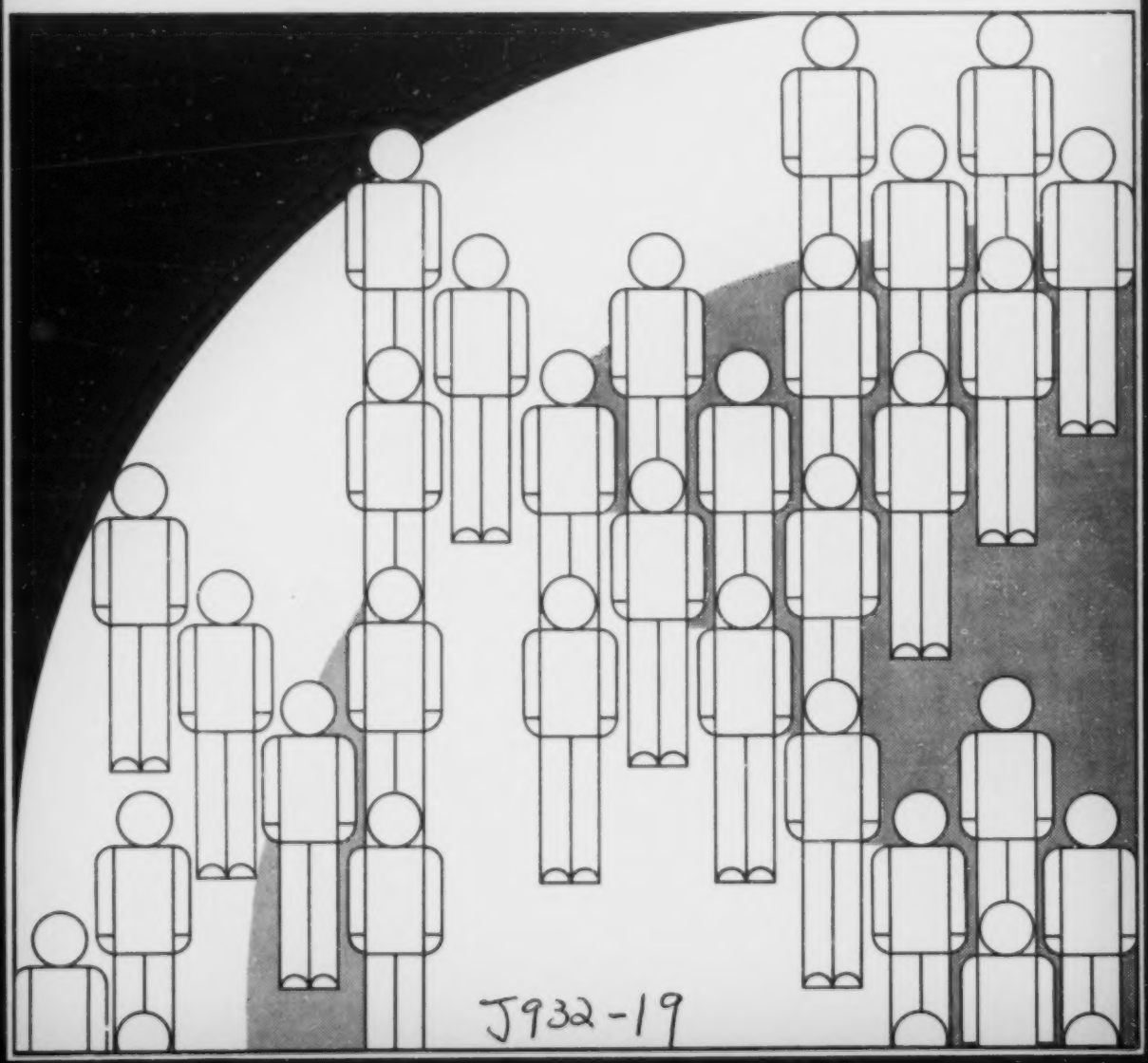
CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

APRIL 1986

Physician Reimbursement Under Medicare: Options for Change



CBO STUDY

PHYSICIAN REIMBURSEMENT UNDER MEDICARE: OPTIONS FOR CHANGE

The Congress of the United States
Congressional Budget Office

J932-19

NOTES

Unless otherwise indicated, all years referred to in this report are calendar years.

Details in the text and tables of this report may not add to totals because of rounding.

Estimates and projections incorporate all legislation enacted as of April 15, 1986 (including the Consolidated Omnibus Budget Reconciliation Act of 1985).

PREFACE

Federal spending per enrollee under Medicare continues to increase at more than twice the rate of economywide inflation. Many factors account for this growth, including aging of the Medicare population, medical advances that expand the services physicians can provide, and poor incentives for physicians to use health care resources prudently. This study, conducted by the Congressional Budget Office (CBO) at the request of Senator Lawton Chiles for the Senate Budget Committee, examines options for changing Medicare's primary method of reimbursing physicians with a view toward achieving better cost containment. In accordance with CBO's mandate to provide objective analysis, this report offers no recommendations.

The study was done by Sandra Christensen of CBO's Human Resources Division, under the general direction of Nancy Gordon and Stephen Long. Roald Euller, also of the Human Resources Division, did the programming required for the data analysis presented in Appendix B. CBO projections presented in the report were made by Diane Burnside of the Budget Analysis Division.

Many others contributed to the study. Jack Hadley and Janet Mitchell were consultants for the study and made numerous helpful suggestions, as did Paul Ginsburg, Peter McMenamin, Louis Rossiter, and Ralph Smith. In addition, useful comments on review drafts were received from Roger Herdman and Jane Sisk at the Office of Technology Assessment, from James Cantwell at the General Accounting Office, and from Jennifer O'Sullivan and James Reuter at the Congressional Research Service. A number of people in the Department of Health and Human Services helped, but especially Ira Burney, Allen Dobson, John Drabek, George Greenberg, Stephen Jencks, William Sobaski, Earl Swartz, Sherry Terrell, and Barbara Wynn. Dr. John Ball assisted by providing the physician's perspective.

Norma Leake helped to verify that tables were accurate. The paper was edited by Sherry Snyder, assisted by Nancy Brooks. Jill Bury prepared the manuscript for publication.

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April 1986

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GLOSSARY

AAPCC	The adjusted average per capita cost of treating Medicare enrollees in the fee-for-service sector, which is used to establish Medicare's capitation payments to prepaid medical plans.
ACR	The adjusted community rate, which is the estimated per capita cost to a prepaid medical plan for providing services covered by Medicare to Medicare enrollees.
CPR	The customary, prevailing, and reasonable system by which Medicare sets payment rates for physicians' services.
CPT-4	The Common Procedural Terminology system (4th ed.) developed by the American Medical Association to describe physicians' services.
DRGs	Diagnosis-related groups, which are used to classify Medicare hospital inpatients to determine payment rates under the prospective payment system.
GDP	Gross domestic product, a measure of domestic production whether the income goes to domestic or foreign residents.
GNP	Gross national product, a measure of domestic income, including income produced abroad and excluding income produced domestically but sent abroad.
HCFA	The Health Care Financing Administration in the Department of Health and Human Services.
HCPCS	HCFA's Common Procedure Coding System used to describe the services billed to Medicare under the Supplementary Medical Insurance program.
HI	The Hospital Insurance program--Part A of Medicare--which pays facility fees for care provided in hospitals, skilled nursing facilities, hospices, and for some home care.

HMO	A health maintenance organization, which is a form of prepaid medical plan in which the physicians who provide services are paid on some basis other than fee-for-service.
IPA	An independent practice association, which is a form of prepaid medical plan in which physicians who provide services are paid on a fee-for-service basis.
MEI	The Medicare Economic Index--an economywide index of earnings and office practice expenses used to limit growth in Medicare's prevailing fees.
PMP	A prepaid medical plan, which provides all covered services to enrollees in return for a fixed per capita payment.
PPO	A preferred provider organization, which is a consortium of physicians and other providers of health care who have agreed with an insurer to treat its enrollees at negotiated (generally discounted) prices.
PPS	The prospective payment system used for Medicare's reimbursement to hospitals.
PROs	Peer Review Organizations, established in each state to monitor both hospital admissions and the quality of care provided to Medicare enrollees.
RAPs	Radiologists, anesthesiologists, and pathologists--supporting physicians whose services are often hospital-based.
RVS	A relative value scale, which gives each medical service a weight to indicate its value relative to any other service.
SMI	The Supplementary Medical Insurance program--Part B of Medicare--which pays for physicians' services, facility fees in hospital outpatient departments and ambulatory surgicenters, and charges by independent laboratories and other medical suppliers.
UCR	The usual, customary, and reasonable system--similar to Medicare's CPR system--that is used by some private insurers to set payment rates.

SUMMARY

Total Medicare reimbursements per enrollee increased at an annual rate of 13.6 percent from 1975 through 1985, more than twice the rate of economywide inflation (see Summary Table 1). Reimbursements per enrollee for Part B of Medicare--the Supplementary Medical Insurance (SMI) program, which pays for physicians' services--increased even more rapidly, at an annual rate of 15.5 percent.

Concern over the alarming rate of growth in costs has led the Congress to reconsider Medicare's methods for reimbursing health care providers, since these methods were not designed to encourage cost-conscious behavior. Historically, hospitals were reimbursed for whatever costs they incurred, giving them little incentive to seek more cost-effective ways of providing care. Physicians were paid on the basis of their customary charges (subject to a limit set by fees prevailing in the community) for whatever services they provided. As a result, they had few incentives either to restrain fee increases or to limit the volume of services provided to their patients.

In fiscal year 1984, Medicare's retrospective cost-based reimbursement system for hospital inpatient care was replaced by the prospective payment system (PPS). Under the PPS, hospitals are paid a fixed amount per admission, based on each patient's diagnosis at the time of discharge. Since (with minor exceptions) the hospital's reimbursement is the same regardless of the services provided to the patient, hospitals have financial incentives to reduce both the patient's length of stay and hospital services provided during the stay, within the limits of acceptable medical practice. Further, they have incentives to deliver services cost-effectively. On the other hand, the PPS also generates incentives for hospitals to increase admissions if possible, and to prefer to admit patients with less severe conditions for a given diagnosis over patients whose care may be more costly.

No significant change in the way Medicare reimburses physicians for their services has been made since 1972, when a cost-based index was introduced to limit growth in payment rates. In 1984, however, the Congress

froze Medicare's payment rates to physicians until October 1985. This was later extended until May 1, 1986, for physicians who signed "participating" agreements, thereby agreeing to accept Medicare's payment rates for all their Medicare patients. For other physicians, the freeze was extended until January 1, 1987.

A freeze is only a temporary measure, however, while fundamental changes for physician reimbursement are developed. Fee constraints are often not effective at containing costs unless accompanied by controls on

SUMMARY TABLE 1. MEDICARE REIMBURSEMENTS AND ANNUAL RATES OF GROWTH, 1975-1985

	Reimbursements (millions of dollars)		Annual Rate of Growth
	1975	1985	1975-1985
Hospital Insurance			
Total Reimbursements	11,315	47,579	15.4
Per Enrollee	470	1,572	12.8
In Constant (1985) Dollars a/	884	1,572	5.9
Supplementary Medical Insurance			
Total Reimbursements	4,273	22,947	18.3
Per Enrollee	181	766	15.5
In Constant (1985) Dollars a/	340	766	8.4
Total Medicare			
Total Reimbursements	15,588	70,526	16.3
Per Enrollee	650	2,337	13.6
In Constant (1985) Dollars a/	1,225	2,337	6.7

SOURCE: Congressional Budget Office from data provided by the Health Care Financing Administration.

a. The gross national product (GNP) deflator was used to obtain constant dollars.

use of services, because physicians may respond to fee constraints by providing more services to their patients. In addition, if fee constraints increase the gap between Medicare's payment rates and the higher rates of other payers, Medicare enrollees might find it more difficult to locate physicians willing to treat them. Further, across-the-board freezes are inequitable for physicians whose fees were already relatively low.

In order to examine more fundamental changes in Medicare's methods for paying physicians, the Congress authorized the creation of a Physician Payment Review Commission in the Consolidated Omnibus Budget Reconciliation Act of 1985. The ongoing duties of this commission (if funded) are to make recommendations to the Congress and to the Secretary of the Department of Health and Human Services concerning Medicare's mechanisms for paying physicians. This study by the Congressional Budget Office (CBO) contributes to the analysis of alternative payment systems.

MEDICARE'S PRIMARY METHOD OF REIMBURSING PHYSICIANS

Under the customary, prevailing, and reasonable (CPR) system by which Medicare currently sets payment rates for physicians in the fee-for-service sector, payment for each service provided is the lowest of the physician's actual charge, the physician's customary charge for that service, or the prevailing fee for that service in the community. Prevailing fees are based on the customary charges of all physicians in the community, but increases in prevailing fees above their values for 1973 are limited by an index of earnings and office practice expenses that is called the Medicare Economic Index (MEI).

Dissatisfaction with the CPR system is widespread, primarily because of the poor incentives it creates for physicians. Specific objections cited are that it:

- Induces inflation in fees;
- Encourages growth in the volume (either the number or the average complexity) of services; and
- Distorts physicians' decisions in other undesirable ways.

The CPR system encourages fee inflation because of the automatic link between physicians' actual charges and Medicare's payment rates, which are based on the previous year's actual charges through the customary and

prevailing fees. Use of the MEI to limit increases in prevailing fees has weakened the link to physicians' actual charges for those physicians whose claims are at the ceiling set by MEI-adjusted prevailing fees, but in 1984 less than half of approved charges were at that ceiling.

Under the CPR system, as in any fee-for-service payment system, physicians have no financial incentives to limit the volume of services they provide to their patients, because each service provided increases physicians' net incomes (so long as payment rates are high enough to cover incremental costs). In a fe for-service system, the financial incentives that physicians face intensify the effects of their training, which teaches them generally to provide all services that might be of any benefit to their patients, regardless of costs. Although part of the increased volume of services provided per enrollee that has occurred since Medicare's inception has been a desirable response to the greater needs of an aging population, aided by remarkable improvements in medical technology, some increases may have been motivated more by physicians' attempts to maintain revenues in the face of fee constraints or insufficient patient-initiated demand for services than by expected benefits for patients. In addition, some increased volume of services per patient may be defensive medicine that has little benefit for patients but serves to protect physicians in the event they are sued for malpractice.

The structure of fees that has evolved under the CPR system may also distort physicians' behavior in undesirable ways. Unless payment rates reflect the costs of providing services, physicians have financial incentives to provide services that have relatively high profit margins. Many analysts believe that the current fee structure encourages physicians to provide procedural care over nonprocedural or "cognitive" care, because diagnostic and therapeutic procedures are reimbursed more generously relative to costs than are visits; to train for a specialty rather than for primary care, because current specialty differentials in Medicare's payments are larger than required to compensate for the additional training costs; and to practice in metropolitan areas rather than smaller cities and rural areas, because location differentials are larger than necessary to account for cost differences.

Cost-sharing by enrollees was intended to help contain Medicare costs, but the potential for cost-sharing to contain costs is quite limited for several reasons. About 80 percent of Medicare enrollees have supplementary health insurance coverage that reduces or eliminates their cost-sharing liabilities. Further, although those who face out-of-pocket costs for medical care reduce the number of physicians' visits they initiate, once an episode of care has been initiated the number and type of physicians' services consumed during the episode are not much affected by cost-sharing.

Finally, physicians who have fewer patient-initiated visits apparently respond by providing more services to the patients they see.

ALTERNATIVE APPROACHES

The Congress has requested a number of studies on alternatives to the CPR system, with a view toward implementing payment methods that would incorporate better incentives for physicians to contain health care costs. This paper discusses three approaches:

- Fee schedules;
- Case-based payments (like the prospective payment system for hospital reimbursement); and
- Capitated payments--fixed payments per enrollee for all covered medical services during a specified period of time.

Options for transforming the CPR system into a fee schedule are emphasized in this study, for two reasons. First, a fee schedule is the most feasible approach to implement in the near term, and it would not prevent more fundamental changes in payment systems in the future. Second, a fee schedule would likely be necessary even if other payment methods were adopted, both as a foundation for the more comprehensive payment rates and as a residual payment system for services or population groups not covered by the other systems. Either case-based or capitated payment systems, in which prospective payments are made for comprehensive packages of services, might become an important part of Medicare's payment methods in the long run. They are largely untried at this time (at least for the Medicare population), however, and evaluation of both the appropriate methods for implementing such systems and the likely effects would be useful.

Overview of Alternatives

Under any of the alternatives discussed in this paper, Medicare could play a more active role in setting payment rates than it does currently under the CPR system. The alternatives differ in the incentives they would create for limiting the volume of services and in the attendant risks of inadequate care for patients.

A fee schedule would, like the CPR system, be a fee-for-service payment method, in which physicians would have incentives to provide a high

volume of services. Controls on use of services therefore would likely be necessary to limit growth in volume and resulting cost increases. Under case-based and capitated payment systems, by contrast, fixed payments per service package would be made regardless of the actual services provided, giving physicians incentives to limit services, at least within the package. In packaged approaches, however, quality of care might be affected adversely if physicians responded to incentives to limit services by eliminating medically necessary care as well as services with little or no benefit. Since appropriate medical care is in many cases a matter of judgment, some physicians might err by providing too few services under packaged payment systems, while they may provide unnecessary services in fee-for-service payment systems. In addition, because confidence in one's physician can improve the outcome of treatment, patients could be adversely affected--even when provided all necessary services--if patients began to doubt their physicians because of perceived conflicts between their own desires for additional services and their physicians' financial interests to forgo them if not medically necessary.

Despite widespread dissatisfaction with the CPR system, some of its problems could be attenuated if the Congress wanted to retain it for the interim while more fundamental changes were developed, as has been proposed by the Administration. Prevailing fees for selected services that were thought to be unreasonably priced could be reduced without regard to customary charges for those services. Volume of services might be better controlled by expanding and improving the very limited review of service patterns that is currently done. Finally, the system could be simplified by reducing the number of specialties and payment localities with separate payment rates. These activities would probably increase administrative costs, however, and no provision for such cost increases has been made in the Administration's budget request for fiscal year 1987.

Fee Schedules

Under a fee schedule, payment rates could be set for each service that were uniform for all physicians, or for all physicians in a given specialty and location. Physicians would be paid the same amount for a given service, in contrast to the CPR system in which each physician may be paid a different amount.

Payment rates under the CPR system are evolving into a set of specialty- and location-specific fee schedules anyway, because of the effect of the limit imposed on increases in prevailing fees by the MEI. Since physicians' customary fees have been increasing more rapidly than the MEI, eventually only MEI-adjusted prevailing fees will be relevant. But this is

not likely to occur until sometime in the next century. Further, the fee schedules that will evolve under the CPR system will reflect the structure of physicians' actual charges during 1971, because MEI-adjusted prevailing fees are simply Medicare's prevailing fees for June 1973 (which were based on charges for calendar year 1971) inflated by increases in the MEI since that time. The relationship between fees in 1971 is unlikely to be appropriate for pricing services now.

Instead of accepting the schedules that will evolve under the CPR system, the Congress could mandate development of a fee schedule. Implementation could perhaps take place within a year of the mandate if the schedule were initially based primarily on Medicare's average allowed amounts or submitted charges. Replacing the CPR system with a fee schedule would cut the inflationary link between physicians' charges and Medicare's payment rates, but a charge-based fee schedule would incorporate elements of the current fee structure that many people believe need to be corrected. The rate structure could be modified incrementally after it had been put in place, or changes in methods for reimbursing physicians could be delayed until a more appropriate fee structure was developed. (As part of the Consolidated Omnibus Budget Reconciliation Act of 1985, the Congress instructed the Secretary of the Department of Health and Human Services to develop, by July 1, 1987, a relative value scale for physicians' services, which could serve as the basis for a fee schedule.)

Decisions would need to be made at the outset about what differentials by specialty and location to incorporate. Although the higher costs of specialty training would justify higher payment rates on a cost basis, specialty differentials might be unnecessary to ensure enrollees' access to care under current circumstances because most specialties are thought to be in oversupply. Differentials by location could be set to reflect geographic cost differences, adjusted where necessary to ensure enrollees' access in all parts of the country.

Although reimbursement under a fee schedule would be on a fee-for-service basis, so that physicians' incentives to provide a high volume of services would remain, there are methods to control volume in fee-for-service payment systems. Claims data could be used to construct practice profiles for each physician, which could be monitored for evidence of excessive or inappropriate billing. (This is done now, to a very limited extent, but it is generally acknowledged that current methods could be greatly improved.) In addition, annual increases in payment rates could be inversely related to volume increases per enrollee, so that growth in Medicare's costs per enrollee could be capped as specified by the Congress regardless of volume increases. If this method caused Medicare's payment rates to fall much below rates approved by other payers, though, pressures

to increase payment rates would likely arise--despite the spending cap--in order to maintain enrollees' access to care.

Case-based Payments

In a case-based payment system, the unit of payment would be the case or condition during a defined episode of care. All covered physicians' services related to the condition and provided during the episode could be included in a single payment amount, regardless of the actual services rendered. Payments made on a per case basis would probably have to be limited to hospital inpatient episodes, however, because of the difficulty of defining unambiguous episodes for ambulatory care.

One case-based option would be to package all physicians' services for inpatient episodes, just as all hospital services are packaged now under the prospective payment system. The primary advantage of this approach would be that physicians would have incentives, now lacking, to limit their own services and the services of consulting physicians for each episode, because use of more physicians' services would increase costs but not revenues.

This approach also has a number of disadvantages. Implementation would not be feasible until a case-classification system suitable for physicians' services had been developed, since at least some modification of the system of diagnosis-related groups (DRGs) currently used to classify cases for hospital reimbursement would be necessary. Further, case-based payments for physicians' services would require radical changes in the way physicians are paid. First, assignment of benefits (that is, acceptance by physicians of Medicare's approved charges as payment in full) would probably have to be mandatory; otherwise, patients would be effectively denied the protection insurance is intended to provide. Given the choice, physicians might refuse assignment for patients whose care was expected to cost more than the case payment, making the patient fully liable for any costs above that payment. Second, payments would probably have to be pooled for groups of physicians--for each hospital's medical staff, for example. If, instead, case payments were made to the primary physician to disburse to other physicians on each case, the financial risks for primary physicians would probably be so great that physicians would refuse to accept potentially "unprofitable" patients. Pooling payments would reduce the financial risks but would also weaken the desired incentives of the payment system, reducing the effect on the behavior of individual physicians. Another disadvantage is that paying primary physicians on a case basis could align their incentives too closely with those of hospitals under the PPS, with the result that physicians might not serve as effectively as advocates for their patients. Consequently, the need for Medicare to monitor the quality

of care provided would increase. Finally, separate payment systems for inpatient and ambulatory care would create the potential for physicians to manipulate the reimbursement system to maximize receipts. For example, services normally provided during an admission might be shifted to the office either before or after the hospital admission, so that claims made for ambulatory services would have to be closely monitored to ensure that Medicare did not pay for services that were intended to be included in the case payment.

A more limited case-based payment option would expand the services included in hospitals' case payments to include patient-related services provided by hospital-based physicians such as radiologists, anesthesiologists, and pathologists. These supporting physicians are commonly employed by or under contract to hospitals anyway, so that the proposed payment method would not be a radical change for many of them. Under this option, hospitals would have incentives, now lacking, to negotiate low-cost rates for these physicians and to use their services more efficiently. This approach, however, could put some physicians--especially those in small communities with only one hospital--in a disadvantageous bargaining position. Further, the potential savings from this approach would be smaller than savings under the option that would include all physicians' inpatient services in the case payment. Inpatient services provided by radiologists, anesthesiologists, and pathologists account for about 10 percent of total physicians' charges under Medicare, while inpatient services provided by all physicians account for about 60 percent of total physicians' charges.

Capitated Payments

Under a capitation approach, Medicare would pay a fixed amount per enrollee to organizations that would, in return, provide or pay for all covered medical services to enrollees. These organizations would profit if enrollees could be served for less, but would lose if expenses per person exceeded Medicare's payments. The agencies at risk would have no financial incentive to provide unnecessary services, since they would receive no extra revenue from doing so; instead, they would have incentives to provide the least expensive set of services that would deal with enrollees' medical needs and to produce those services as efficiently as possible.

Studies of non-Medicare population groups have shown that good health care can be provided under capitated payment systems at costs that are about 25 percent below costs in the fee-for-service sector. Health care may be better coordinated under capitated payment systems, because central records are maintained and incentives exist to provide the most cost-effective mix of services, including preventive care. On the other

hand, patients may be restricted both in their choice of physicians and in the services that are provided to them. Savings under capitated payment systems found for other population groups, however, might not be as large for the Medicare population. Studies of other population groups that compared capitated payment systems with fee-for-service systems found that most savings under capitated payment plans resulted from lower use of the hospital. But the prospective payment system--together with Medicare's preadmission review requirements--already limits use of the hospital by Medicare enrollees. Some additional Medicare savings could result from capitation, though, because there would be financial incentives to reduce all unnecessary medical services, while under the PPS the financial incentives work only to reduce the length of hospital stays but not to reduce hospital admissions or physicians' services.

The organizations at risk under a capitated payment system might be prepaid medical plans (PMPs) that combine the roles of insurer and health care provider, or they might be traditional insurers who arrange for others to provide all covered health care services. Capitated payments to PMPs for Medicare enrollees are already permitted under law, and the Administration has proposed to expand this option to include traditional insurers as well. Areawide capitation plans that would cover all Medicare enrollees in a geographic area also are under consideration by the Administration.

Under current law, all Medicare enrollees have the option of joining a prepaid medical plan, but as yet less than 5 percent has done so. Medicare's capitation payments to these plans are set at 95 percent of the average per capita cost of benefits provided on a fee-for-service basis in the same community to enrollees with similar characteristics. Both enrollees and PMPs currently benefit from expanded Medicare enrollment, since PMPs' costs are generally below Medicare's capitated payments, and part of the resulting profits to PMPs must be returned to enrollees in the form of reduced copayments or supplemental benefits to the standard Medicare package. Profits to PMPs arise partly from their greater concern for cost-conscious care compared with fee-for-service providers, but may also result in part from the plans' selection of Medicare enrollees who are healthier than average. If such biased selection is prevalent, Medicare's costs for PMP enrollees could be higher than they would be if all enrollees received care in the fee-for-service sector.

Enrollment in prepaid medical plans is unlikely to be large enough to make capitation the dominant form of payment for Medicare enrollees so long as they are free to choose between capitated and fee-for-service care, because the former restricts their choice of physicians. In order to expand the number of Medicare enrollees who choose to opt out of the standard Medicare program in favor of a capitated alternative, the Administration

has proposed to permit enrollees to use a voucher (the value of which would be set in the same way capitation rates to PMPs are set) to purchase traditional indemnity insurance. Qualified plans would have to provide a benefit package that was actuarially equivalent, but not necessarily identical, to the standard Medicare package. Medicare enrollees thus would have choices about the benefit package that they do not have now. Retired enrollees with employer-based insurance coverage, for example, might be able to use the voucher to supplement benefits already provided by their employer-based plans, thereby avoiding duplicative coverage and obtaining a single package that better suited their needs. Some Medicare enrollees without employer-based coverage might also choose the voucher option, if alternative insurance coverage could be purchased through membership groups that would reduce insurers' marketing costs. (If insurers had to market directly to individuals, the plans offered would probably not be attractive compared with the standard Medicare package, because premiums would have to be substantially higher than expected benefits to cover marketing costs.)

Expanding Medicare enrollment in capitated payment systems may not be advisable, however, until improved methods of setting capitation rates have been developed, thereby reducing insurers' incentives for biased selection. Because the current method for setting rates does not adequately account for differences among types of enrollees in the costs of providing medical care, traditional insurers, like PMPs, would have incentives to seek to attract only healthier enrollees, leaving more costly enrollees in the standard Medicare program. If this biased selection occurred, Medicare costs would be higher than if all enrollees were served in the standard program, because the fee-for-service costs on which capitation rates are currently based would reflect the services used by high-cost Medicare enrollees, while PMPs and other insurers with Medicare enrollees would be serving relatively low-cost patients.

Another alternative that might bring all Medicare enrollees under a capitated payment system--one with fewer problems associated with biased selection--is "carrier capitation." (A carrier is an agency, usually an insurer, that is paid to process claims under Part B of Medicare and to disburse payments within a given jurisdiction, such as a state.) Under this system, carriers would be paid a fixed amount for each Medicare enrollee in their jurisdictions and would be required to negotiate with health care providers to ensure that enrollees could obtain all covered services. They would have financial incentives that carriers now lack to obtain discounts from providers and to institute comprehensive utilization review programs. The federal role would become one of awarding contracts to carriers and monitoring their performance to ensure that conditions specified in their contracts were fulfilled.

This approach would present at least two major concerns, however. First, establishing contract language and monitoring mechanisms that would ensure that enrollees' access to and quality of care were not eroded could prove difficult. Continuation of the current Medicare program as one option that carriers must offer could serve as a safeguard for enrollees, but would also increase carriers' financial risks, so that fewer organizations would compete for the contracts, and contract costs would likely be higher. Second, areawide capitation contracts could give too much market power to the carriers selected. While this market power could be used for the benefit of Medicare enrollees by enabling carriers to negotiate substantial discounts with providers, thereby reducing enrollees' out-of-pocket costs, it could also be used to eliminate potential competitors for future Medicare capitation awards. As a result, the federal government might have no other oganizations to turn to if the original carriers failed to perform acceptably.

CHAPTER I

INTRODUCTION AND BACKGROUND

The Medicare program is one of the largest items in the federal budget, and one of the fastest growing. In fiscal year 1985, net spending for Medicare was $65.8 billion and accounted for 7 percent of total federal outlays. Under current law, Medicare is expected to grow at an annual rate of 11.3 percent, to more than 9 percent of federal outlays by 1991. Part B of Medicare, which pays for physicians' services, is expected to grow more rapidly than the rest of Medicare, at an annual rate of 14.7 percent from fiscal year 1986 through 1991.

Congressional concern about the effects of Medicare costs on the federal budget is high, but there is also concern about effects on Medicare enrollees of their payments for out-of-pocket medical expenses and for health insurance premiums. 1/ Although the share the elderly pay of their health care costs, either directly or through insurance premiums, has declined a little in recent years--from 40 percent in 1977 to 37 percent in 1984--health care payments claim a larger share of their incomes now because of increased overall costs. 2/ In 1984, out-of-pocket costs plus insurance premiums for health care paid by the elderly exceeded $1,500 on average--about 15 percent of personal income. This proportion has increased from 12 percent in 1977 and is now about the same as in 1966, before Medicare was implemented. 3/

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1. Out-of-pocket costs are the share of charges for specific services paid by the patients. They include deductible and coinsurance amounts on approved charges, as well as any billed amounts in excess of the insurer's approved rates. Premiums paid for insurance are not included in the definition of out-of-pocket costs used here.

2. The share paid by the elderly has declined slightly because the share of Medicare costs financed by premiums has decreased and the Part B deductible has fallen as a proportion of average per capita benefits. Other copayments have increased.

3. See *Medicare and the Health Costs of Older Americans: The Extent and Effects of Cost Sharing*, S. Prt. 98-166, Special Committee on Aging, U.S. Senate, 98:2 (April 1984); and *America's Elderly at Risk*, Select Committee on Aging, U.S. House of Representatives, 99:1 (July 1985).

Further, Medicare's initial reimbursement methods were not designed to encourage cost-conscious behavior by health care providers. As a result, interest has focused on finding better ways to limit payments to health care providers. Major changes in Medicare's methods for reimbursing hospitals have already been made. This paper discusses alternative ways in which Medicare could reimburse physicians.

Although only about one-fourth of Medicare's reimbursements are for physicians' services, physicians direct the allocation of most Medicare spending because their authorization is necessary for hospital admission and for most medical tests. Consequently, any change in physicians' practice patterns induced by new payment methods could have a far greater effect on Medicare costs than the share spent directly on physicians' services would indicate. This, in turn, could have a substantial effect on general health care costs, since Medicare enrollees account for more than one-third of total health care spending in the United States.

This study discusses Medicare's current payment methods for physicians and examines the advantages and disadvantages of proposed alternatives. The study does not consider modifications to Medicare's benefit structure, such as altering coverage or cost-sharing provisions. The remainder of this chapter provides a brief description of the Medicare program and a discussion of ways in which the market for health care differs from other markets, with implications for Medicare's physician reimbursement policies.

Chapter II describes Medicare's current physician reimbursement methods and the associated problems. Chapter III provides an overview of proposed alternatives--including fee schedules, prospective payments per case or episode of care, and prepaid capitated payment systems. Chapter III also reviews the Administration's 1987 budget proposals for modifying--but retaining--Medicare's current physician payment methods in the short term, while preparing for more fundamental changes in the future.

Chapter IV examines fee schedule approaches while Chapters V and VI discuss, respectively, case-based and capitation approaches. The latter two are packaging options that might become important parts of Medicare's payment methods in the long run, but that are largely untried (at least for the Medicare population) at this time.

THE MEDICARE PROGRAM

Medicare was enacted in 1965 and implemented on July 1, 1966. It is an insurance program that finances health care services for more than 27 million people age 65 and over and for another 2.7 million disabled people.

The Medicare program has two parts--Hospital Insurance (HI) under Part A, and Supplementary Medical Insurance (SMI) under Part B. Bills for inpatient hospital care, some stays in skilled nursing facilities, and home health services are paid by the HI program. The SMI program pays for physicians' services and for charges by hospital outpatient departments, independent medical laboratories, and other medical suppliers. About 80 percent of reimbursements under the SMI program (and 25 percent of total Medicare reimbursements) are for physicians' services.

The HI program is financed by a portion of the Social Security payroll tax levied on current workers. The SMI program is financed partly from premiums paid by enrollees (currently 25 percent) and partly from general revenues (75 percent).

Eligibility

More than 95 percent of the elderly are eligible for HI benefits based on previous Social Security or Railroad Retirement payroll tax payments, and those who are not may purchase coverage by paying a monthly premium ($214 in 1986). SMI coverage is available to all people age 65 and over with payment of a monthly premium ($15.50 in 1986), and 97 percent of those with HI coverage also enroll in the SMI program. In addition to the elderly, disabled people entitled to Social Security cash benefits for at least 24 consecutive months and people with end-stage renal disease are eligible for Medicare benefits.

Coverage and Cost-Sharing Requirements

Medicare is designed to cover primarily acute-care needs rather than to provide a comprehensive range of medical services. As such, it pays for slightly less than half of total health care costs for the elderly (see Table 1). The most important coverage exclusions are long-term nursing home care, outpatient drugs, and dental services, which account for about 30 percent of total health care costs for the elderly. 4/

4. *Medicare and the Health Costs of Older Americans*, Special Committee on Aging, U.S. Senate.

TABLE 1. EXPENDITURES FOR PERSONAL HEALTH CARE, FOR ALL AGE GROUPS AND FOR PEOPLE AGE 65 AND OLDER, BY SOURCE OF FINANCING AND TYPE OF SERVICE, 1984

Source of Financing	Type of Service: In Billions of Dollars: All Care	Physicians	Hospitals	As a Percent of Total: All Care	Physicians	Hospitals
Personal Health Care for All Age Groups						
Total Expenditures	341.8	75.4	157.9	100.0	100.0	100.0
Out-of-Pocket a/	95.4	21.0	13.7	27.9	27.9	8.7
Third Party	246.4	54.4	144.2	72.1	72.1	91.3
Private	111.0	33.5	59.9	32.5	44.4	37.9
Government	135.4	20.9	84.3	39.6	27.7	53.4
Medicare	63.1	14.6	44.4	18.5	19.4	28.1
Medicaid b/	36.7	3.1	14.1	10.7	4.1	8.9
Other	35.6	3.2	25.8	10.4	4.2	16.3
Personal Health Care for People 65 and Older						
Total Expenditures	119.9	24.8	54.2	100.0	100.0	100.0
Out-of-Pocket a/	30.2	6.5	1.7	25.2	26.2	3.1
Third Party	89.7	18.3	52.5	74.8	73.8	96.9
Private	9.2	3.4	4.5	7.7	13.7	8.3
Government	80.5	14.9	48.0	67.1	60.1	88.6
Medicare	58.5	14.3	40.5	48.8	57.8	74.8
Medicaid b/	15.3	0.5	2.6	12.8	1.9	4.8
Other	6.7	0.2	4.9	5.6	0.7	9.1

SOURCES: Compiled by Congressional Budget Office from data reported in Katharine R. Levit and others, "National Health Expenditures, 1984," *Health Care Financing Review*, vol. 7, no. 1 (Fall 1985), Tables 3 and 8; and in Daniel R. Waldo and Helen C. Lazenby, "Demographic Characteristics and Health Care Use and Expenditures by the Aged in the United States: 1977-1984," *Health Care Financing Review*, vol. 6, no. 1 (Fall 1984), Table 11.

a. Excludes insurance premiums.

b. Includes Medicaid purchase of Medicare coverage for Medicare-eligible recipients.

Remaining health care costs not reimbursed by Medicare occur because of Medicare's cost-sharing requirements. Medicare's copayment requirements in the HI program for 1986 included a first-day deductible of $492 for hospital stays, coinsurance of at least $123 a day for hospital stays exceeding 60 days, and coinsurance of $62.50 a day for stays in skilled nursing facilities exceeding 20 days. In the SMI program, Medicare enrollees are responsible for 20 percent of all approved physicians' charges above an annual deductible amount ($75 in 1986). In addition, they are liable for 100 percent of any charges in excess of Medicare's approved rates if their physicians do not accept assignment of benefits. Physicians who accept assignment agree to accept Medicare's approved rates, in return for Medicare's guarantee of payment directly to the physicians for 80 percent of approved charges once the deductible amount is exceeded. (Physicians must still bill patients for deductible amounts and for the 20 percent coinsurance.) By rejecting assignment, physicians can charge enrollees more than approved Medicare rates (a practice known as balance-billing), but then reimbursement is made to patients, and physicians have no guarantee that billed amounts will be collected.

Supplements to Medicare's Coverage

Charges for services not covered by Medicare and copayments required by Medicare for covered services are generally paid by Medicaid for Medicare enrollees who qualify. Medicaid is the federal/state health insurance program that serves about 40 percent of the poor population. More than 10 percent of Medicare enrollees nationwide are Medicaid beneficiaries, although eligibility conditions vary by state. 5/

In addition, about 70 percent of Medicare enrollees have private supplementary insurance coverage, or "medigap" policies. This insurance usually covers the coinsurance and some of the deductible payments required under Medicare for covered services, but in many cases does not pay for services not covered by Medicare. For example, costs for long-term care in a nursing home are rarely covered, and physicians' charges in excess of Medicare's approved rates are covered for only about half of medigap policyholders. 6/

5. About 9 percent of Medicare enrollees are people with low incomes for whom state Medicaid programs purchase SMI coverage by paying the SMI premium, a transaction called a buy-in. Some other Medicare enrollees qualify at some time during the year for Medicaid benefits under Medicaid's "medically needy" provisions. These people have incomes too high to be eligible for Medicaid benefits normally, but have incurred very large medical costs relative to their incomes.

6. National Center for Health Services Research, "Private Health Insurance Coverage of the Medicare Population," National Health Care Expenditures Study, Data Preview 18, September 1984.

Costs and Cost-Control Efforts in Medicare

The primary concern when the Medicare program was enacted was to provide access to care for the nation's elderly population. 7/ Although the need for health care typically increases with age, before Medicare many elderly people were unable to obtain private health insurance at reasonable cost after retirement. In order to gain acceptance for the program, Medicare reimbursed health care providers on the basis of their costs (for hospitals) or their customary charges (for physicians). Medicare was a passive payer initially, and made no attempt to negotiate fees or to control use of services. Since hospitals were reimbursed for whatever costs they incurred, they had little incentive to seek more cost-effective ways of providing care. Because physicians were paid on the basis of their customary charges for whatever services they provided, they had incentives both to increase their fees and to provide a high volume of services. 8/

Unexpectedly rapid growth in Medicare costs led quickly to the introduction of cost-control provisions, beginning with the Social Security Amendments of 1972. Early efforts included peer review of hospital admissions, limits on above-average costs per day for hospital stays, and cost-based limits on the rate of increase in payment rate ceilings for physicians. Despite these cost-control provisions, Medicare costs continued to increase rapidly. Total reimbursements per enrollee grew at an annual rate of 15.5 percent between 1975 and 1982--7.2 percentage points higher than the rate of economywide inflation (see Table 2). 9/

More stringent cost-control measures have been enacted recently. For hospitals, limits on annual increases in operating costs per discharge were imposed in 1982; and in 1983, retrospective cost-based reimbursement for inpatient services was replaced by the prospective payment system (PPS). Under the PPS, hospitals are paid a fixed amount per admission, based on each patient's diagnosis at the time of discharge. Initially, 468 diagnosis-related groups (DRGs) were defined for payment. Since reimbursement is the same regardless of the services provided to the patient, hospitals have a financial incentive to reduce the patient's length of stay and the costs of services provided during the stay, within the limits of acceptable medical practice. No fundamental change has yet been made in Medicare's payment

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7. Coverage for the disabled began later, on July 1, 1973.

8. Throughout this paper, volume increases are defined to include increases in the number of services provided, increases in their general level of complexity, or increases in both.

9. The base year used is 1975 because economywide wage-price controls were in effect from 1971 through 1974.

methods for physicians, but the annual update in reimbursement rates that would normally have been made on July 1, 1984, was eliminated. Rates for all physicians were initially frozen until October 1, 1985. The freeze was later extended until May 1, 1986, for physicians who sign participating agreements with Medicare, thereby consenting to accept Medicare's payment rates. For other physicians, the freeze was extended until January 1, 1987.

As a result of recent cost-control measures, together with a decline in the rate of general inflation, the rate of growth in Medicare's costs per enrollee dropped to 7.5 percent for 1984--about half the average rate of growth from 1975 through 1982. In constant dollars, Medicare reimbursements per enrollee grew by only 3.2 percent for 1984--the lowest rate of growth since the early 1970s.

TABLE 2. ANNUAL RATES OF GROWTH IN REIMBURSEMENTS UNDER MEDICARE, 1975-1985 (In percents)

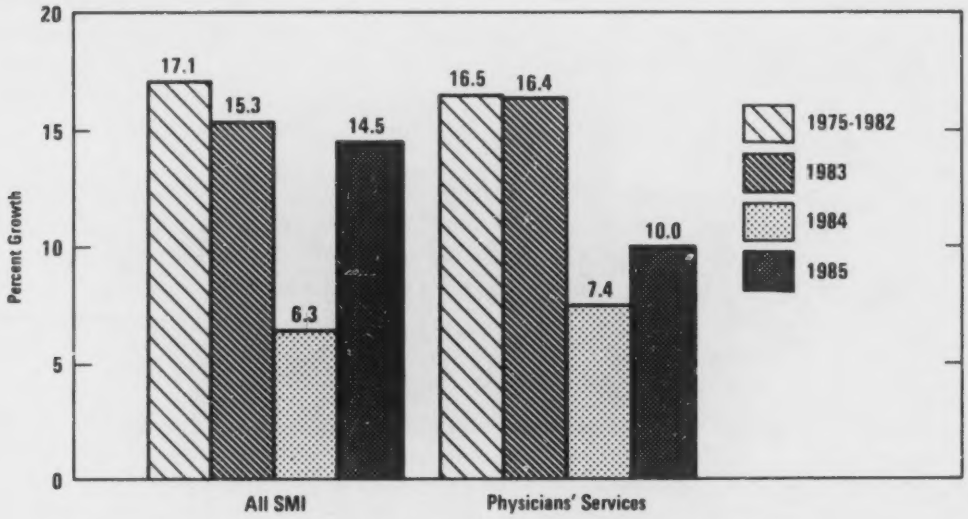
Reimbursements	1975-1982	1983	1984	1985
Hospital Insurance				
Total Reimbursements	17.8	10.4	10.0	10.0
Per enrollee	14.9	8.6	8.0	8.2
In constant dollars a/	6.6	4.6	3.8	4.7
Supplementary Medical Insurance				
Total Reimbursements	20.2	17.2	8.6	16.7
Per enrollee	17.1	15.3	6.3	14.5
In constant dollars a/	8.7	11.1	2.1	10.8
Total Medicare				
Total Reimbursements	18.5	12.4	9.5	12.1
Per enrollee	15.5	10.6	7.5	10.1
In constant dollars a/	7.2	6.6	3.2	6.6

SOURCE: Congressional Budget Office, from data provided by the Health Care Financing Administration.

a. Reimbursements per enrollee after eliminating the effects of general inflation, as measured by the gross national product (GNP) deflator.

Figure 1.

SMI Reimbursements Per Enrollee, Annual Growth Rates, 1975-1985



SOURCE: Congressional Budget Office from data provided by the Health Care Financing Administration.

In 1985, however, growth rates increased, especially for the SMI program. A significant part of the jump in SMI costs for 1985 (and the slowing of cost growth for 1984) was caused by billing changes for nonphysician services (hospital outpatient departments and laboratories). 10/ Costs for physicians' services followed a similar (but less extreme) pattern, although for different reasons (see Figure 1, above). Because physicians' payment rates were frozen throughout 1985, the increased growth in spending for physicians' services apparently resulted from increased growth in volume, although this conclusion is speculative at this time. 11/

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10. Beginning in mid-1984, SMI payments for laboratory services were set by fee schedules, at 60 percent to 62 percent of then-prevailing charges. This reduced laboratory charges overall for the SMI program, and also required hospital outpatient departments to switch from a cost-basis to a fee schedule for reimbursement of laboratory services. As a result of the change in methodology, there were delays in Medicare payments to hospital outpatient departments for the last half of 1984 and early 1985.

11. A study of the extent of volume increases during the freeze on physician fees has been funded by the Health Care Financing Administration, with results expected by 1988.

THE MARKET FOR HEALTH CARE SERVICES

Spending for health care increased from 6.1 percent of gross national product (GNP) in 1965 to 10.6 percent of GNP in 1984. Part of this increase in resources spent on health care represented improvements in access to and quality of care, the first resulting from wider availability of health insurance coverage and the second from advances in the practice of medicine. At the same time, however, widespread health insurance coverage may have caused expenditures to rise faster than warranted by improvements in care. 12/

The market for health care is unusual for at least two reasons: the prevalence of third-party payment through insurance, and the dual role of physicians as both health care advisers and providers. As explained below, patients have incentives to demand services whose potential benefits are less than the costs of providing them, while most physicians (those paid on a fee-for-service basis) have incentives to encourage patients to obtain all services of any potential net benefit. As a result, from a social point of view, too much may be spent for health care at the expense of other important needs unless third-party payers implement mechanisms to control health care spending.

Patients' Behavior in an Insured Market

When bills are paid by a third party, patients have weaker financial incentives to restrict the price and volume of services than when patients bear full financial responsibility. Income permitting, patients will generally purchase additional health services so long as the anticipated benefits (net of any inconvenience and risk involved) exceed their out-of-pocket costs. Because out-of-pocket costs are less than charges when patients have insurance coverage, insured patients are more likely than uninsured patients to expand their demand for services to include those with small expected benefits. At the extreme, patients whose insurance policies do not require cost-sharing will seek services so long as there is any net expected benefit, no matter how small. Insured patients make more office visits and may submit to more diagnostic tests and therapeutic procedures than they would

12. About 85 percent of all people, and 99 percent of people age 65 or older, had some insurance coverage during the fourth quarter of 1983, based on data from the Survey of Income and Program Participation, which is conducted regularly by the Bureau of the Census.

if they paid all of the resulting charges. 13/ Further, they may be less likely than uninsured patients to shop for a better price on services, since only part of any resulting savings would accrue to them.

Patients' demands for services will expand even when patients as a group pay the full costs of insurance coverage through premiums. This expansion occurs because most patients respond to out-of-pocket costs--the effective price they face at the time of service--without concern for the higher insurance premiums they might be charged in later years because of increased use of services by the insured population. There is even more reason for expansion in patients' demand for services when the insured population--like the Medicare population--does not pay the full cost of insurance through premiums. In this case, purchasing power is transferred to Medicare enrollees from taxpayers who subsidize the Medicare program. 14/

The purpose of health insurance is to transform the large and unpredictable costs that individuals may face for medical care into a moderate and predictable expense, by pooling the risks across a suitably large population. The resulting protection is highly desirable, but an inevitable accompaniment to insurance coverage is a reduction in incentives for the insured population to purchase covered services prudently.

Physicians' Behavior

Physicians can and do influence their patients' use of medical services. Such influence is considered to be an important part of the physician's job, as the patient's agent in areas where the patient is not well informed. When serving as an agent or adviser for patients, a physician is expected to suggest any services that could be of benefit to the patient, allowing the patient to decide whether the expected net benefits, as explained by the physician, are large enough to justify the associated out-of-pocket costs. Considerable un-

13. See Joseph P. Newhouse and others, "Some Interim Results from a Controlled Trial of Cost-Sharing in Health Insurance," *New England Journal of Medicine*, vol. 305, no. 25 (December 17, 1981), pp. 1501-1507; and K.N. Lohr and others, "Effect of Cost-Sharing on Medical Care Episodes and Episode Size" (paper presented at the 113th Annual Meeting of the American Public Health Association, Washington, D.C., November 1985).

14. Medicare enrollees' benefits are subsidized in two ways. Most enrollees in the Hospital Insurance program paid payroll taxes during their working years to establish their eligibility for benefits, but the current value of taxes paid is far below the insurance value of current benefits. Enrollees in the voluntary Supplementary Medical Insurance program pay premiums to establish their eligibility for benefits, but premiums cover only 25 percent of benefits, and the remainder is paid from general revenues.

certainty exists in the practice of medicine, however, and thus suggested treatment for a given set of presenting symptoms may differ widely among physicians. One factor that may sometimes influence physicians' treatment patterns in the face of uncertainty about appropriate care is the financial incentives they face.

A concern is that physicians may sometimes respond to economic pressures that would otherwise reduce revenues from their practices by attempting to induce patients to consume additional medical services whose expected benefits would be small. As a result, events that might be expected to reduce health care costs--such as fee constraints, or a growing supply of physicians relative to the population, or increased cost-sharing that reduced patient visits--could be at least partially offset by physician-induced increases in the volume of services. 15/

One general model of physicians' behavior might be that physicians seek to establish an optimal mix of income, leisure, and professional satisfaction. If their current equilibrium were disrupted by, for example, a fee freeze that reduced their real incomes (because costs increased while practice revenues were unchanged under current practice patterns), physicians would make adjustments in an attempt to recover some portion of the loss in real income. Physicians might, for example, work more hours (reducing leisure) by accepting more patients or suggesting more follow-up visits for established patients. Another adjustment might be to bill for more services or for more complex services than they would have previously (perhaps reducing professional satisfaction). This latter adjustment could be accomplished in two ways: by "unbundling" services, billing separately for services such as laboratory tests that physicians had previously provided without charge as part of an office visit; or by "code creep," providing more complex (and more highly reimbursed) services than physicians would previously have considered as adequate treatment. 16/

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15. See Gail R. Wilensky and Louis F. Rossiter, "The Relative Importance of Physician-induced Demand in the Demand for Medical Care," *Milbank Memorial Fund Quarterly*, vol. 61, no. 2 (Spring 1983), pp. 252-277, for evidence that physician density has a significant, but small, effect on increasing physician-induced demand for services. See Marianne Fahs, "Physician Response to Cost Sharing: The Other Side of the Coin" (paper presented at the 113th Annual Meeting of the American Public Health Association, Washington, D. C., November 1985), for evidence that, when patients faced with higher cost-sharing cut down on their number of visits, physicians respond by inducing the patients they see to use more services.

16. Note in particular that one need not assume that physicians alter their practice patterns in whatever way necessary to maintain some preset "target income" in order to explain demand-inducement by physicians.

Evidence from a number of "natural" experiments during the 1970s--in California, Colorado, and Quebec--indicates that physicians tend to respond to fee constraints by increasing the number and complexity of services for which they bill. 17/ The clearest evidence comes from state Medicaid program data where patients' copayments were small fixed amounts per encounter, so that changes in approved reimbursement rates had no effect on patient behavior. Studies of the California Medicaid program in the mid-1970s show that physicians billed for increasingly more complex (and thus more costly) services per encounter with Medicaid patients during a period of several years when Medicaid payment rates were declining in real terms, but that average complexity per encounter fell the year that Medicaid payment rates were increased. 18/

Some people have suggested that the scope for volume responses may be more limited now than in the 1970s, because of heightened competition in the health care sector and increased demand by both insurers and patients for cost-conscious care. Experience with the fee freeze in the SMI program (discussed above) appears to indicate, however, that there is still scope for volume increases by physicians in response to fee constraints.

Insurers' Behavior

The onus is on insurers to design mechanisms to control both charges for and the use of health care services since, as discussed above, neither patients nor physicians have incentives to use medical services prudently in an insured fee-for-service market.

Cost-sharing is widely used by insurers to limit patients' overuse of services, and it effectively reduces the number of episodes of care initiated by patients. Once an episode of care has been initiated by a patient, though, cost-sharing apparently has little or no effect in limiting the volume or cost

17. For a review of studies on this subject, see Jon R. Gabel and Thomas H. Rice, "Reducing Public Expenditures for Physician Services: The Price of Paying Less," *Journal of Health Politics, Policy, and Law*, vol. 9, no. 4 (Winter 1985), pp. 595-609.

18. See John Holahan, Margaret Sulvetta, and William Scanlon, "Medicaid Fee Controls and Physician Behavior: Preliminary Evidence from California," Working Paper No. 1250-03 (Urban Institute, Washington, D.C., 1981). See also Philip J. Held, John Holahan, and Cathy Carlson, "The Effects of Medicaid and Private Fees on Physician Participation in California's Medicaid Program, 1974-1978," Working Paper No. 1306-02-01 (Urban Institute, Washington, D.C., 1983).

of services provided (or ordered) by physicians. 19/ Further, there is evidence that when a significant portion of a physician's patients faces increased cost-sharing, the resulting reduction in visits by those patients induces the physician to increase fees and the volume of services provided to patients who do present themselves for care. 20/

Consequently, controls by insurers on physicians and other health care providers appear to be important to contain costs effectively when care is provided on a fee-for-service basis. Constraints on fees alone are at best only partially effective at restraining costs, since physicians are able to respond to limits on the prices they charge for services by increasing or upgrading the services for which they bill. Utilization controls appear to be necessary in the fee-for-service sector to limit the ability of physicians to increase the volume of services for which they bill, in response either to fee constraints or to a low patient load. Alternatively, incentives to limit the volume of services could be created by replacing fee-for-service reimbursement with payments for more comprehensive service packages, such as fixed prepayments for all care provided a patient in a given period of time, commonly called capitated payments.

19. Lohr and others, "Effect of Cost-Sharing on Medical Care and Episode Size."

20. Fahs, "Physician Response to Cost Sharing."

CHAPTER II

CURRENT METHODS OF REIMBURSING PHYSICIANS UNDER MEDICARE

Medicare currently pays for physicians' services in two ways--either on a fee-for-service basis or on a capitation basis. In the fee-for-service system, Medicare pays physicians or their employers for each service provided to Medicare enrollees. In the capitation system, Medicare pays a fixed amount per enrollee to a prepaid medical plan (PMP) that agrees in turn to provide all covered services required by enrollees during a specified period of time. 1/

More than 95 percent of Medicare enrollees receive care in the fee-for-service sector, and Medicare's payment methods in this sector are the focus of this chapter. As the result of provisions in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), Medicare enrollment in PMPs may grow to be similar to the share for the nonaged population, which is currently about 9 percent (but increasing rapidly). 2/ Unless enrollment in PMPs is made mandatory for receipt of Medicare benefits, though, there will likely always be a substantial proportion of Medicare enrollees who prefer to receive care in the fee-for-service sector, so that the issue of changes in fee-for-service payment methods will remain.

Medicare sets payment rates for physicians' services in the fee-for-service sector using the customary, prevailing, and reasonable (CPR) system. 3/ In 1984, about 85 percent of allowed amounts under the CPR system was paid to physicians. The remainder was paid to limited license practitioners (such as psychologists or podiatrists), to independent labora-

1. Prepaid medical plans include both health maintenance organizations and other competitive medical plans.

2. Enrollment under TEFRA was delayed, because implementing regulations were not published until January 1985.

3. This is called the usual, customary, and reasonable (UCR) method by private insurance companies that use it.

tories, or to suppliers of medical equipment and ambulance services (see Table 3). This study focuses on payments to physicians.

About 35 percent of Medicare payments for physicians' services were made to generalists--general or family practitioners and internists. About 36 percent of payments was to surgical specialists, 14 percent was to non-surgical specialists, and another 14 percent was to supporting physicians in

TABLE 3. ALLOWED AMOUNTS FOR CPR CLAIMS, BY TYPE OF PROVIDER, 1984

Type of Provider	Allowed Amounts		Percent for Inpatient Services
	In Millions of Dollars	As a Percent of Total	
Physicians	17,326.8	85.0	59.0
Limited License Practitioners a/	797.8	3.9	10.2
Laboratories	362.7	1.8	1.0
Medical Suppliers b/	1,896.8	9.3	0.8
All Providers c/	20,384.0	100.0	50.6

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Procedure file.

NOTE: CPR = customary, prevailing, and reasonable system.

a. Includes psychology, podiatry, optometry, audiology, chiropractic, dentistry, and physical therapy.

b. Includes suppliers of medical equipment, prosthetics, and ambulance services.

c. Total does not include charges for hospital outpatient department facility fees or for risk-based prepaid medical plans, since these are not reimbursed through the CPR system.

radiology, anesthesiology, and pathology. Less than 1 percent of payments went to osteopathic physicians. Services to hospital inpatients accounted for 59 percent of Medicare's allowed amounts for physicians' services, although this share varied considerably by physician specialty (see Table 4). Physicians' inpatient services are already subject to some constraints that arise indirectly from the effects (discussed later) of the prospective payment system on hospitals.

TABLE 4. ALLOWED AMOUNTS FOR PHYSICIANS' SERVICES, BY PHYSICIAN SPECIALTY, 1984

Specialty	Allowed Amounts		Percent for Inpatient Services
	In Millions of Dollars	As a Percent of Total	
Generalists a/	6,012.7	34.7	47.7
Nonsurgical Specialists b/	2,476.4	14.3	60.4
Surgical Specialists c/	6,271.4	36.2	66.6
Radiologists	1,453.3	8.4	51.0
Anesthesiologists	833.3	4.8	93.4
Pathologists	164.3	0.9	72.2
Osteopaths	115.4	0.7	30.8
All Physicians	17,326.8	100.0	59.0

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Procedure file.

a. Includes general practice, family practice, internal medicine, pediatrics, and clinics.

b. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, psychiatry, and pulmonary disease.

c. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

Nearly 75 percent of allowed amounts to physicians were for medical care, medical consultations, or surgery. Diagnostic laboratory tests billed by physicians accounted for more than 7 percent of allowed amounts, and diagnostic radiology accounted for another 9 percent (see Table 5). The proportion of physicians' charges that were for laboratory tests should be lower in subsequent years, because physicians may no longer bill Medicare for tests done outside the office; instead, laboratories performing the tests must bill Medicare directly.

TABLE 5. ALLOWED AMOUNTS FOR PHYSICIANS' SERVICES, BY TYPE OF SERVICE, 1984

Specialty	Allowed Amounts		Percent for Inpatient Services
	In Millions of Dollars	As a Percent of Total	
Medical Care	6,315.3	36.4	49.3
Surgery	5,888.1	34.0	75.9
Assistance at Surgery	314.8	1.8	89.2
Anesthesia	840.3	4.8	94.2
Diagnostic Laboratory Tests	1,240.8	7.2	26.6
Diagnostic Radiology	1,578.5	9.1	44.3
Therapeutic Radiology	235.1	1.4	18.6
Consultations a/	621.6	3.6	77.6
Other b/	292.3	1.7	2.2
All Services	17,326.8	100.0	59.0

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Procedure file.

a. Includes first and second opinions for surgery.

b. Includes treatment for renal patients, pneumococcal vaccine, and medical supplies, among other things.

HOW THE CPR SYSTEM WORKS

This section discusses four basic elements of the CPR system: how the unit of payment is defined, how payment rates are set, what requirements for assignment are specified, and what controls on volume are imposed.

Unit of Payment

The unit of payment under the CPR system is the service--including visits, consultations, and procedures. About 7,500 different services are recognized for payment purposes under HCFA's Common Procedure Coding System (HCPCS), including not only physicians' services but also codes for supplies or services provided by nonphysicians. HCPCS, which is based on the American Medical Association's Current Procedural Terminology (CPT-4) system, was adopted by Medicare in 1982 as the common system to be used for all SMI claims. Conversion to HCPCS was completed in July 1985. Before that time, a uniform coding system had not been used in all regions to identify the SMI services billed to and paid by Medicare.

Payment Rates

Under the CPR system, Medicare's approved charge for each physician's service is set at the lowest of four alternative rates: 4/

- Physician's submitted charge--the billed amount;
- Physician's customary charge--defined as the physician's median charge for that service during the previous year;
- "Unadjusted" prevailing charge for that service in the locality--defined as the 75th percentile of the distribution of customary charges for all physicians in the locality; or
- "Adjusted" prevailing charge--defined as the prevailing charge applicable in June 1973 inflated by an index of earnings and office expenses called the Medicare Economic Index (MEI).

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4. A number of terms are used interchangeably to refer to Medicare's payment rates, including "reasonable charge," "approved charge," "approved amount," and "allowed amount." Ordinarily, Medicare's payments (either to physicians or their patients) would be allowed amounts less deductible and coinsurance amounts paid by enrollees. Under the provisions of the Balanced Budget and Emergency Deficit Control Act of 1985, however, Medicare's payments will be reduced by 1 percent during the period from March 1, 1986, through the remainder of the fiscal year. This reduction does not affect the determination of allowed amounts.

Medicare's approved rates are less than submitted charges for nearly 85 percent of physicians' services billed, because of the effects of the customary and prevailing fees or "screens." In 1984, about 15 percent of allowed amounts was equal to physicians' submitted charges, while 30 percent was reduced by customary screens and 55 percent was reduced by prevailing screens (see Table 6).

The adjusted prevailing screen was added by legislation enacted in 1972 as a device to slow the growth in SMI costs. Since physicians' actual charges have typically increased at a faster rate than the MEI, the proportion of approved charges with payment set by MEI-adjusted prevailing fees has been increasing over the years. If the CPR system is continued, the proportion of charges set by adjusted prevailing fees will continue to grow, though slowly. CBO estimates that by fiscal year 1991, under current law, about 72 percent of Medicare's approved charges will be set by prevailing fees, and that 56 percent of charges will be set by MEI-adjusted prevailing fees. 5/ The relationship between payment rates for services whose rates are set by adjusted prevailing fees is the same as the relationship between prevailing fees in 1973. These rates, in turn, were set by physicians' actual charges during calendar year 1971.

In principle, Medicare may modify payment rates based on customary and prevailing fees when they are not "inherently reasonable"--in comparison with payment rates for the same services for non-Medicare patients, for example, or using information about the costs of providing the services. To date, only very limited use has been made of inherently reasonable criteria to override the charges based on customary and prevailing fees, but the Health Care Financing Administration has proposed to make more aggressive use of this provision to reduce rates. 6/

Medicare's approved rates vary by geographic location and, in most payment localities, by specialty. Medicare contracts with private insurance companies (called carriers) to administer payments to physicians, including calculation of approved rates and payment of claims. In 1984, there were 56 Medicare carriers and 240 payment localities. 7/ Most carriers (all but six)

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5. These projections use the current MEI. If the MEI were rebased as proposed by the Administration in its 1987 budget, the percent of charges set by prevailing fees would be slightly higher (see Chapter III).

6. Transmittal 1115, dated August 1985. See also the proposed rule published in the *Federal Register*, vol. 51, no. 32 (February 18, 1986), p. 5726.

7. In addition, there are regional carriers that administer SMI reimbursements for Railroad Retirement beneficiaries.

TABLE 6. PERCENT OF PHYSICIANS' ALLOWED AMOUNTS AND BILLS CONSTRAINED BY ALTERNATIVE FEE SCREENS, 1984

Physician Practices by Specialty and Location	Fee Screen Used to Set Payment			Fee Screen Used to Set Payment		
	Billed Amount	Customary Screen	Prevailing Screen a/	Billed Amount	Customary Screen	Prevailing Screen a/
	Percent of Allowed Amounts			Percent of Services Billed		
All Practices b/	14.5	30.4	55.1	17.4	31.4	51.2
Generalists						
General practice	23.6	27.8	48.6	22.0	26.7	51.3
Family practice	19.3	27.7	53.0	18.7	24.4	56.9
Internal medicine	15.5	29.7	54.8	15.4	27.4	57.2
Specialists						
Nonsurgical c/	17.3	37.3	45.4	18.1	38.0	43.9
Surgical d/	10.7	29.3	60.0	16.6	39.4	44.0
All Practices by Location						
Nonmetropolitan	19.5	23.3	57.2	19.8	19.3	60.9
Metropolitan	13.7	31.4	54.9	16.8	34.3	48.9

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes the unadjusted prevailing, the adjusted prevailing, and lower ceilings set by "inherently reasonable" criteria or by HCFA regulations. HCFA regulations specify that payment rates for certain medical and radiology services rendered in hospitals not exceed specified percentages of the prevailing fees for those services when rendered in physicians' offices. Further, clinical laboratory fees are set by fee schedules.

b. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

c. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

d. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

establish specialty-specific prevailing rates for each service. Carriers are free to set whatever criteria they choose to define specialties for payment purposes, including board certification, board eligibility, or self-designation by physicians. The latter, however, is used almost exclusively. 8/

Assignment

Since October 1, 1984, Medicare has had a "participating physician" program, under which participating physicians agree on a year-to-year basis to accept assignment on all Medicare claims. Nonparticipating physicians may accept or reject assignment on a claim-by-claim basis, as all physicians treating Medicare patients did before the participating physician program was introduced. As incentives to participate, the Deficit Reduction Act of 1984 (DEFRA) provided for periodic publication of lists of participating physicians and electronic claims processing for them. In addition, physicians who did not sign participating agreements were prohibited from increasing their billed amounts for Medicare during the period of a fee freeze imposed on all physicians under DEFRA. 9/ About 30 percent of physicians who treat Medicare patients signed participating agreements for fiscal year 1985, and 28 percent signed agreements for fiscal year 1986.

Assignment rates on Medicare's SMI claims have never dropped below 50 percent, and they increased slowly from their nadir in the mid-1970s through 1983. Assignment rates increased from 50.5 percent in 1976 to 53.9 percent in 1983, although the average reduction by Medicare on billed amounts grew from 19.5 percent to 23.2 percent (see Table 7). 10/ Most analysts attribute the increase in Medicare's assignment rates through 1983

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8. Ira Burney and others, "Medicare Physician Payment, Participation, and Reform," *Health Affairs* (Winter 1984), pp. 6-24.

9. All physicians--both participating and nonparticipating--were subject to a freeze on Medicare's payment rates in effect from July 1, 1984, until May 1, 1986 (or January 1, 1987, for nonparticipating physicians). Participating physicians, however, were permitted to increase actual charges (or billed amounts), while nonparticipating physicians were not. An increase in actual charges by participating physicians could have no effect on Medicare enrollees' liabilities or physicians' Medicare receipts during the freeze because of assignment, but under the CPR system it would result in an increase in Medicare's payment rates for these physicians when the freeze was lifted.

10. Alma McMillan, James Lubitz, and Marilyn Newton, "Trends in Physician Assignment Rates for Medicare Services, 1968-1985," *Health Care Financing Review*, vol. 7, no. 2 (Winter 1985).

TABLE 7. MEDICARE PART B ASSIGNMENT RATES BASED ON SMI CLAIMS AND CHARGES, AND PERCENT REDUCTION ON SUBMITTED CHARGES, 1968-1985

Calendar Year	Basis for Assignment Rates		Percent Reduction on Submitted Charges
	Claims	Charges	
1968	59.0	--	--
1969	61.5	--	--
1970	60.8	--	--
1971	58.5	53.8	11.4
1972	54.9	50.3	11.2
1973	52.7	48.1	12.2
1974	51.9	47.8	14.4
1975	51.8	47.7	17.4
1976	50.5	47.6	19.5
1977	50.5	48.2	19.0
1978	50.6	49.6	19.3
1979	51.3	50.7	20.8
1980	51.5	51.7	22.4
1981	52.3	53.0	23.5
1982	53.0	54.2	23.7
1983	53.9	55.6	23.2
1984	59.0	59.6	24.9
1985	68.5	68.6	26.9

SOURCE: Health Care Financing Administration, Bureau of Quality Control. Reprinted from Alma McMillan, James Lubitz, and Marilyn Newton, "Trends in Physician Assignment Rates for Medicare Services, 1968-1985," *Health Care Financing Review*, vol. 7, no. 2 (Winter 1985).

to greater competitive pressures on physicians, because of the growing number of physicians relative to the population. This effect has apparently been large enough to offset the reduction in assignment rates that would otherwise have resulted from the decline in Medicare's payment rates relative to physicians' submitted charges. 11/

11. See Lynn Paringer, "Medicare Assignment Rates of Physicians: Their Responses to Changes in Reimbursement Policy," *Health Care Financing Review*, vol. 1, no. 3 (Winter 1980), pp. 75-89.

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Assignment rates jumped dramatically following implementation of the participating physician program in 1984. For the first quarter of calendar year 1985, the assignment rate was 68.5 percent overall--63.9 percent for physicians and 82.5 percent for suppliers. The average assignment rate for participating physicians was 100 percent, of course, while the average rate for nonparticipating physicians was 43.5 percent. 12/

Controls on Volume

Although Medicare carriers have long been expected to conduct some utilization review to detect fraudulent claims, until recently there were no formal guidelines or requirements for carriers to follow. Beginning in 1984, however, Medicare carriers were required to institute prepayment screens to detect fraudulent, erroneous, or excessive claims for seven common services, expanded to 16 services effective November 1985 (see Table 8). Further, by fiscal year 1987, HCFA hopes to develop formal guidelines for carriers' postpayment utilization review activities in order to improve their effectiveness at identifying physicians whose practice patterns indicate chronic overprovision of services.

In addition, some controls on the volume of physicians' services operate indirectly through the prospective payment system. Peer Review Organizations (PROs) seek to eliminate unnecessary hospital admissions, and hospitals have financial incentives under the PPS to minimize lengths of stay for patients who are admitted. As a result, some physicians' services are being shifted to ambulatory settings, while others may be eliminated. The potential for these hospital-focused efforts to control Medicare's costs for physicians' services is substantial, because nearly 60 percent of Medicare's approved charges for physicians are for inpatient services. 13/

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12. Health Care Financing Administration, Bureau of Quality Control, "Report on Medicare Participating Physician/Supplier Claim Workloads, January-March 1985." Separate assignment rates for physicians and nonphysicians are not available for prior years. The Deficit Reduction Act of 1984 contained a provision that made assignment mandatory for independent laboratories--one of the nonphysician providers billing under Medicare Part B.

13. CBO tabulations from HCFA's 1984 Medicare Annual Data Procedure file.

TABLE 8. PREPAYMENT SCREENS FOR SMI REIMBURSEMENT

Type of Claim	Screen
Routine Foot Care (Except acute surgery and mycotic nails)	Every 60 days
Joint Injections	3 per month
Mycotic Nails	1 treatment per 60 days
Nursing Home Visits	1 per month
B-12 Injections	1 per month based on diagnosis
Comprehensive Visit, New Patient	1 per carrier history (16 to 27 months)
Holter Monitoring	1 per 6 months
Chiropractic (Spinal manipulation)	12 per year
Concurrent Care (Inpatient)	Different practitioner, same or similar specialty, sees patient same day
Hospital Visits	31 per month; 31 per 3 months
Comprehensive Visit, Established Patient	1 per 6 months
Skilled Nursing Facility (Subsequent care, brief visit)	2 first week, 1 per week thereafter
Injections (All except B-12, joint, allergy, chemotherapy)	24 per year
Urological Supplies (Indwelling catheters)	2 per month
Postcataract Replacement of Contact Lens	1 per eye per year
Assistants at Cataract Surgery a/	None at routine surgery

SOURCE: Congressional Budget Office from information provided by the Health Care Financing Administration.

NOTE: Effective November 1, 1985, Medicare carriers were required to use these prepayment screens, which are intended to trigger medical review, not automatic denial, of claims exceeding the screens.

a. Under the provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, no payment will be made for assistants at cataract surgery unless prior approval by the carrier has been obtained.

PROBLEMS WITH THE CPR SYSTEM

The CPR system is widely thought to be unsatisfactory. 14/ A major problem is that it encourages increases in both the price and the volume of services, with resultant increases in costs for the Medicare program and for Medicare enrollees. A second problem is that fee differentials resulting under the CPR system may affect the health system in undesirable ways, by encouraging inappropriate treatment patterns and overspecialization by physicians. Other problems attributed to it are that it is administratively complex and confusing for both physicians and patients.

Poorly Designed to Constrain Costs

Both the price and the volume of services must be controlled to constrain costs, and the CPR system is weak on both counts. Fee increases are encouraged because Medicare's payment rates in one year are based on physicians' actual charges in the previous year for physicians whose customary fees are below Medicare's prevailing fees. 15/ Increases in the volume of services provided per enrollee are encouraged because the CPR system reimburses on a fee-for-service basis. Physicians have incentives--offset to some degree by concern about patients' costs--to provide all services of any potential benefit so long as payment rates are high enough to cover the incremental costs of providing the services.

Cost-sharing by patients should help to limit both fee increases and the volume of services, but the effect of these requirements is diluted by the prevalence of supplemental insurance coverage for Medicare enrollees. As discussed in Chapter I, about 70 percent of Medicare enrollees purchase medigap coverage, while more than 10 percent of enrollees are Medicaid beneficiaries.

Studies cited in Chapter I indicate that the primary effect of cost-sharing for the 20 percent of Medicare enrollees without supplemental

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14. Criticisms of the CPR system could apply equally to UCR reimbursement in private insurance programs. CPR-UCR reimbursement methods were rare until adoption by Medicare. At that time, many of the insurance companies chosen as Medicare carriers--principally Blue Shield plans--adopted CPR-UCR methods for their private plans as well, partly to facilitate administration. Hence, replacement of Medicare's CPR system might lead to related changes in private reimbursement methods.

15. Donald E. Yett and others, "Fee Screen Reimbursement and Physician Fee Inflation," *Journal of Human Resources*, vol. 20, no. 2 (Spring 1985), pp. 278-291.

TABLE 9. PRACTICING PHYSICIANS IN THE UNITED STATES, SELECTED YEARS

	1950	1960	1970	1980	1990 a/	2000 a/
Physicians	219,900	259,400	326,500	457,500	594,600	706,500
Per 1,000 Population	1.41	1.40	1.56	1.97	2.38	2.64

SOURCE: Congressional Budget Office from data in Department of Health and Human Services, *Health, United States, 1984*, Table 60.

a. Projected.

coverage comes through the disincentive to initiate an episode of care; once initiated, decisions about further care are influenced by physicians so that the effect of cost-sharing by patients is reduced. A physician whose patient load is low may provide more intensive (and expensive) care--longer office visits, additional follow-up visits, or more tests, for example--than one with a heavy patient load. 16/ Consequently, growth in the number of physicians per capita, which has resulted in smaller patient loads on average, may have increased the services used per Medicare enrollee in recent years (see Table 9, above). In addition, as discussed in Chapter I, physicians tend to increase the volume of services for which they bill in response to constraints on the level of their fees. Some growth in volume per enrollee may result from the increasing constraint imposed by use of the MEI to limit increases in prevailing fees, as Medicare's approved rates for a growing proportion of physicians' charges have been set by MEI-adjusted prevailing fees rather than by physicians' customary fees. Finally, many people believe that the increasing threat of malpractice suits has caused physicians to practice more service-intensive care as a defense.

Not all growth in the volume of services in the past was undesirable, however. The average age of the Medicare population has been increasing, and the need for medical services typically increases with age. In addition, remarkable advances in medical technology have been made in recent years, including improved surgical techniques for cataracts, techniques to alleviate the pain associated with clogged arteries supplying the heart, and pro-

16. See Gail R. Wilensky and Louis F. Rossiter, "The Relative Importance of Physician-induced Demand in the Demand for Medical Care," *Milbank Memorial Fund Quarterly*, vol. 61, no. 2 (1983), pp. 252-277.

cedures for successful replacement of major joints. As a result, both the need for medical services among the Medicare population, and the ability of physicians to respond to those needs, have expanded.

The net effect of the incentives for fee inflation and volume increases under the CPR system, together with the rising number of physicians per capita and recent medical advances, has been a highe rate of growth in Medicare's costs for physicians' services than can be explained by growth in Medicare enrollment and in general inflation. The rest of this section describes the historical growth in Medicare's approved charges and reimbursements for physicians' services.

Approved charges for physicians' services under Medicare grew at an average annual rate of 17 percent from July 1975 through June 1984. 17/ The growth rate in approved charges per enrollee was 14 percent over this period--more than 7 percentage points higher than general inflation (see Table 10). Reimbursements for physicians' services grew even more rapidly than approved charges--nearly 19 percent over this period--because increases in the SMI deductible amount did not keep pace with increased charges.

About one-third of the growth in approved charges per enrollee resulted from greater volume of services (increases in either the number or the average complexity of services), while nearly two-thirds was caused by increases in approved rates. Almost 80 percent of the increase in approved rates, however, reflected general inflation in the economy. When the effects of general inflation are eliminated, one can see that volume increases contributed about 2.5 times as much as real fee increases to growth in costs per enrollee for physicians' services between 1975 and 1984 (Figure 2). 18/

In 1984, the growth of costs for physicians' services dropped substantially. Data on physicians' charges for all of 1984 are not yet available, but the rate of growth in reimbursements was nearly halved between calendar years 1983 and 1984 (see Table 11). Part of this drop was caused by the

17. The latest consistent data available on physicians' charges under Medicare were for the 1984 program year (July 1 - June 30) at the time of publication.

18. Fee increases are calculated for a fixed bundle of medical services, so that increases in the general complexity of services provided are included in the measure of service volume.

TABLE 10. ANNUAL RATES OF GROWTH IN APPROVED CHARGES FOR PHYSICIANS' SERVICES UNDER MEDICARE, PROGRAM YEARS 1975-1984 (In percents)

Components of Growth	1975-1984
Approved Charges	17.1
Number of Enrollees	2.3
Charges Per Enrollee	14.4
Volume of services a/	4.9
Fee increases b/	9.1
Real fees	1.8
General inflation c/	7.2

SOURCE: Congressional Budget Office from data in the 1986 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund.

NOTES: Program years are from July 1 through June 30. Only enrollees age 65 or older are included in these numbers.

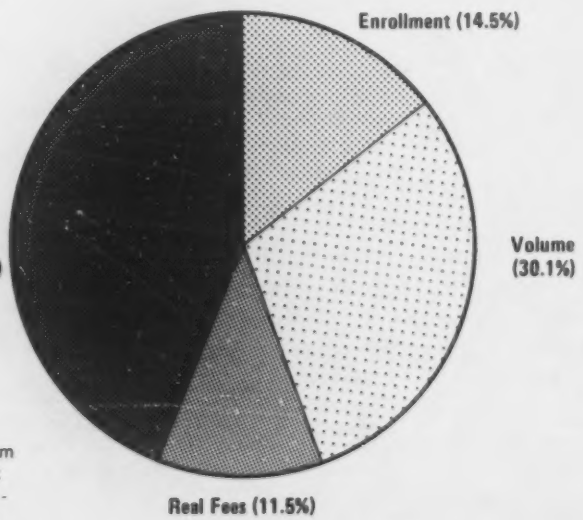
a. Increases in either the number or the average complexity of services.

b. Increases in fees approved by Medicare.

c. As measured by the GNP deflator.

Figure 2.

Components of Growth in Approved Charges for Physicians' Services, Program Years 1975-1984



SOURCE: Congressional Budget Office from data in the 1986 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund.

TABLE 11. ANNUAL RATES OF GROWTH IN REIMBURSEMENTS FOR PHYSICIANS' SERVICES UNDER MEDICARE, 1975-1985 (In percents)

Reimbursements	1975-1982	1983	1984	1985 a/
Total Reimbursements	19.5	18.2	9.8	12.1
Per Enrollee	16.5	16.4	7.4	10.0
In Constant Dollars b/	8.1	12.1	3.2	6.4

SOURCE: Congressional Budget Office from data provided by the Health Care Financing Administration.

a. Preliminary estimates.

b. Reimbursements per enrollee after eliminating the effects of general inflation, as measured by the GNP deflator.

freeze on Medicare's payment rates effective July 1, 1984. In addition, it seems likely that recent cost-control measures directed at hospitals--the PPS and the new peer review procedures for hospital admissions--have helped to limit the volume of physicians' services. 19/

In 1985, however, the rate of growth of costs for physicians' services increased despite continuation of the fee freeze throughout the year. This was apparently the result of accelerated growth in the volume of services, although it is difficult to disentangle the effects of the many changes that have been made in Medicare since 1982.

Inappropriate Effects on the Health Care System

Medicare's fee differentials by type of service, by physician specialty, and by location are the result of the evolution of payment rates under the CPR system, rather than of systematic determination. Unless payment rates for services reflect the costs of producing them, incentives exist for physicians

19. Hospitals were brought under the PPS during the year beginning October 1, 1983, according to the start of each hospital's fiscal year. Peer Review Organizations began operations on July 1, 1984.

to prefer to provide those services for which payment rates are high relative to costs. To the extent that existing differentials do not reflect costs, there may be undesirable responses by physicians--in their treatment patterns, their decisions to specialize, and their location decisions--although there is no strong empirical evidence for any of these effects.

Treatment Patterns. Fee differentials by type of service in Medicare are commonly perceived as creating financial incentives for unnecessary tests or for surgical and other procedural care over cognitive care, such as history-taking and discussion of methods by which patients might prevent or alleviate their own symptoms. For many medical problems, there is a range of diagnostic and treatment approaches consistent with accepted medical practice; however, little is known about the relative efficacy of many of these approaches. In such situations, some physicians may tend to recommend approaches that would be especially profitable for them.

In a neutral fee structure, fees would closely reflect the costs of the resources required to provide each service, so that physicians' choices would depend only on the effectiveness of the services and on patients' preferences. Required resources might include the physician's time (adjusted for skill) as well as space, equipment, supplies, and office staff that must be paid for by the physician. Resources actually used might be greater than the minimal set of resources necessary to deliver adequate service if, for example, uncomplicated procedures were performed by specialists, but many analysts would argue that payment rates should not allow for skills (or any other resources) that were not required.

Under the CPR system, however, some services are reimbursed more generously relative to costs than others. 20/ Procedures that have become routine or automated as a result of advances in technology are usually very profitable, because the rates established for them when they were introduced--and that may have been appropriate at the time--are not adjusted downward when the procedure becomes less costly to perform. Examples that have been cited include coronary artery bypass surgery. cataract surgery, pacemaker implants, electrocardiographs, and x-rays. 21/

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20. For example, one study indicates that, even after standardizing for complexity, physicians are paid four to five times as much per hour for surgery as for office visits. See W.C. Hsiao and W.B. Stason, "Toward Developing a Relative Value Scale for Medical and Surgical Services," *Health Care Financing Review*, vol. 1, no. 2 (Fall 1979), pp. 23-38.

21. See M.S. Blumberg, "Provider Price Changes for Improved Health Care Use," in G.K. Chacko, ed., *Health Handbook* (Amsterdam: North-Holland Publishing Co., 1979). Medicare's approved charges for these services were $3.8 billion in 1984 (exclusive of anesthesiologists' fees), so that savings from downward adjustment could be substantial.

Bypass surgery, for example, required extraordinary expertise and an enormous amount of the surgeon's time when it was first introduced. The cardiac surgeon was heavily involved from start to finish on a case, including diagnostic studies, preoperative preparations, the surgery itself, and postoperative care. Now, however, experience and improved methods have made the surgery simpler, faster, and less risky, while most of the pre- and postoperative care is provided (and billed) by other physicians.

Despite these changes, reimbursement rates initially set for the surgeon have been increased each year under the CPR system, rather than reduced to reflect the surgeon's decreased responsibilities. As a result, thoracic surgeons could receive about $538,000 annually by performing three bypass operations each week, based on amounts allowed by Medicare for 1984. By one estimate, performing three bypass operations a week would represent a maximum time commitment of 12 hours weekly. 22/ For comparison, internists would have to provide about 400 office visits each week to receive the same total allowed amounts annually from Medicare. This would mean that internists could spend no more than nine minutes with each patient, working 60 hours a week every week of the year.

Some analysts believe that Medicare's rates also favor hospital-based over office-based care, so that physicians have financial incentives to hospitalize patients for services that could be provided on an ambulatory basis. Rates for physicians' services other than visits are generally the same wherever the services are rendered. 23/ But physicians' costs are probably lower for services provided in the hospital, because physicians do not bear the costs of overhead and support staff for hospital care as they do for office-based care. Such expenses account for about 40 percent of disbursements for an office-based practice. (The other 60 percent is net physician income.) In most cases, though, office expenses are unavoidable costs of maintaining a practice, because physicians must typically staff an

22. B.B. Roe, "The UCR Boondoggle: A Death Knell for Private Practice?" *New England Journal of Medicine*, vol. 305, no. 1 (July 2, 1981), pp. 41-45.

23. Currently, there are only two exceptions to this. For radiology, regulations limit reimbursement for interpretation services provided in hospitals (either inpatient or outpatient) to 40 percent of the prevailing charge for the total service (interpretation and the technical component) provided in an office setting. For nonsurgical services rendered in hospital outpatient departments that are routinely provided in physicians' offices, regulations limit physician reimbursement to 60 percent of the prevailing charge for that service when provided in an office setting.

office full-time even though some of their services are provided in the hospital. Consequently, spreading these office expenses across all services may be appropriate, whether services are provided in the office or the hospital. In the case of visits, Medicare's rates (for a given type of visit to a given physician) are typically 10 percent to 30 percent higher if the visits are in the hospital rather than the office. 24/ Some difference in rates may be justified, however, by the more complex nature of the care generally needed by hospital patients compared with office patients; that is, office and hospital visits with the same name may not be the same in practice. 25/

Specialization. Education, like investments in property or financial assets, yields a return on the initial commitment of time or money because of the increased income received as a result of the investment. At least through 1983, the real rate of return to medical education was substantially higher than the return to training for other occupations requiring postbaccalaureate education, and the rate of return to specialization after obtaining a medical degree was also very high. Consequently, the fee structure provided financial incentives to obtain a medical degree and to specialize, despite projections of an oversupply of physicians in all but primary care specialties--general or family practice, general internal medicine, and pediatrics. 26/ By one estimate, the real rate of return to medical education in 1983 was 16 percent, averaged across specialties. 27/ The return for general practitioners was 11 percent, while the return for selected surgical and hospital-based specialties ranged from 16 percent to 22 percent (see Table 12).

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24. CBO tabulations from HCFA's 1984 Medicare Annual Data Provider file.

25. Jack Hadley and others, "Final Report on Alternative Methods of Developing a Relative Value Scale of Physicians' Services," HCFA Contract 500-81-0053 (Urban Institute, Washington, D.C., October 1984), Table I-3, pp. 15-17.

26. *Report of the Graduate Medical Education National Advisory Commission to the Secretary*, Department of Health and Human Services (1980).

27. Frank Sloan and Joel Hay, "Medicare Pricing Mechanisms for Physicians' Services: An Overview of Alternative Approaches," *Medical Care Review*, vol. 43, no. 1 (Spring 1986). See also papers by Philip Burstein and Jerry Cromwell, "Relative Incomes and Rates of Return for U.S. Physicians," *Journal of Health Economics*, vol. 4, no. 1 (March 1985), pp. 63-78; and by Stephen Dresch, "Marginal Wage Rates, Hours of Work, and Returns to Physician Training and Specialization," in Nancy Greenspan, ed., *Issues in Physician Reimbursement* (Health Care Financing Administration, Pub. No. 03121, August 1981).

TABLE 12. REAL RATES OF RETURN TO MEDICAL EDUCATION, BY SPECIALTY, 1983 (In percents)

Specialty	Rate of Return to Training
All Physicians	16
General Practice/Family Practice	11
Internal Medicine	14
Pediatrics	9
Surgery	19
Obstetrics-Gynecology	16
Radiology	20
Anesthesiology	22
Pathology	17
Psychiatry	13

SOURCES: Frank Sloan and Joel Hay, "Medicare Pricing Mechanisms for Physicians' Services: An Overview of Alternative Approaches," *Medical Care Review*, vol. 43, no. 1 (Spring 1986).

The rate of return to medical training may be lower in the future owing to reduced federal assistance for medical education and to increased competition for patients. The current high rate of return provides some assurance, though, that more stringent controls on fees and utilization of medical services could be introduced without reducing physicians' net incomes to such an extent that too few would choose to train for medical careers in future years.

For students who decide to obtain a medical degree, a neutral structure for physician fees (if all payers adopted it) would result in equal rates of return regardless of specialty, and medical students therefore would be financially indifferent to choice of specialty. Since specialty training takes longer, specialists would earn more for a given work year, but only by enough to compensate for their greater investment in training. This effect could occur even if all physicians were paid the same rate for each type of service rendered, since specialists would generally provide a more complex mix of services that would result in higher net income per year.

Location. The range in rates for specific services across Medicare's 240 payment localities is substantial, and it appears unlikely that these differences are an accurate reflection of differences in living and practice costs by location. One study of Medicare's 1975 prevailing fees for surgical procedures attempted to explain fee variations by differences in living costs, malpractice premiums, quality of care, and physician supply relative to population, with little success. Some of the variation was explained by living costs, but fees adjusted for living costs still varied threefold from one locality to another. None of the other factors considered in the study appeared sufficient to account for the remaining variation. 28/

Analysis of county data nationwide for 1984 showed that the correlation between Medicare's prevailing fees for a set of common services and an area wage index (the PPS wage index, used as a measure of physicians' costs) was often quite low. 29/ For general practitioners, the correlation ranged from .17 (for a cystoscopy) to .68 (for an office visit). For specialists, the correlation varied from .37 (for a cystoscopy) to .54 (for an office visit). 30/

Medicare's rates for visits (to internists for office visits by established patients) are 50 percent higher in urban areas than in rural areas, on average nationwide, while costs are only 23 percent higher, at least as measured by the PPS wage index. 31/ If Medicare's allowed amounts for visits are appropriate relative to costs nationwide, then allowed amounts in urban areas are 3 percent higher than necessary to account for cost differences, and in rural areas are 16 percent too low (see Table 13). It is uncertain whether the PPS wage index is appropriate for assessing differences in physicians' costs by location, however. It may adequately account for

28. T. Bogue, *Why Not the Most? A Physician's Guide to Locating in Cities with the Most Excessive Medicare Fees in the Country and an HEW Guide to Stopping This Waste of a Billion Dollars* (Washington, D.C.: Health Research Group, February 1977).

29. The PPS wage index is the hospital wage index used to adjust payment rates to hospitals by location under the prospective payment system. This index was developed by the Health Care Financing Administration from information on wages and hours worked obtained by surveying hospitals that treat Medicare patients. It is based on average hourly wage costs for full-time hospital employees, including residents and provider-based physicians.

30. CBO analysis from the May 1985 Area Resources file, maintained by the Health Resources and Services Administration, U.S. Department of Health and Human Services.

31. The specialty of internal medicine was used because nearly 20 percent of Medicare payments are to physicians in this one group. An average payment across all office visits for established patients was used, rather than the payment for a specific office visit code (such as a "limited office visit"), because of possible variation across regions in how the office visit codes are used.

TABLE 13. COMPARISON OF PHYSICIANS' FEES AND COSTS, BY CENSUS DIVISION AND URBAN/RURAL LOCATION, 1984

Census Division	Internists' Average Fees for All Office Visits			Fees Relative to PPS Wage Index		
	Urban	Rural	All	Urban	Rural	All
New England	25	16	25	0.97	0.75	0.98
Mid-Atlantic	23	21	22	0.82	0.94	0.79
East North Central	24	19	23	0.92	0.86	0.88
West North Central	24	12	19	0.98	0.58	0.79
South Atlantic	28	32	28	1.20	1.53	1.21
East South Central	20	18	19	0.92	0.93	0.89
West South Central	19	15	18	0.82	0.73	0.78
Western Mountain	27	22	27	1.05	0.98	1.07
Pacific	33	31	33	1.07	1.22	1.08
Overall	27	18	26	1.03	0.84	1.00

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file for fees. Cost index uses the wage index of the prospective payment system (PPS), aggregated over counties in each geographic area and using number of physicians as a weight.

variation in the 80 percent of physicians' costs that reflect earnings--either the physician's own net income or costs for nonphysician office personnel. It would only be coincidence, however, if the PPS wage index adequately reflected differences by location in the other components of physicians' costs, such as rent, office equipment and supplies, and malpractice insurance.

The actual difference in the costs of maintaining a practice may be smaller than would be indicated by any index of per unit costs, though, because of differences between urban and rural areas in the practice options available to physicians. Despite lower hourly wage rates and rental costs per square foot, rural practices may be nearly as costly to maintain as urban practices. One reason for this is that rural practices may be less able to use office personnel and space as efficiently as urban practices can, because there is less opportunity for group practice in rural areas. Another reason is that rural practices may need to maintain more fully equipped offices, because independent facilities for such things as diagnostic testing and outpatient surgery are lacking in some rural communities.

If fee differences by location do not accurately reflect differences in costs, then the structure of fees could affect physicians' decisions on where to locate. For example, because Medicare's rates are higher in urban areas than in rural areas by more than appears necessary to account for cost differences, Medicare's payment rates may have contributed to the widely cited undersupply of physicians in rural areas compared with urban areas. Despite current fee differentials, there is evidence that physicians are beginning to disperse to relatively underserved areas, in response to increasing competition for patients. 32/ Reducing fee differentials between urban and rural areas could help to increase the rate of dispersion. In fact, some people have argued for elimination of urban/rural fee differentials, partly because practice costs do not appear to differ substantially between urban and rural areas. 33/ In addition, analysts have suggested that the greater personal and professional amenities available in urban areas are sufficient attraction for most physicians without the need for higher payment rates to draw them.

Other Problems

As mentioned earlier, the CPR system is complex to administer and confusing for both physicians and their patients. Carriers must maintain data files on actual charges for every service provided by every physician treating Medicare patients in their jurisdictions. Approved charges are determined individually for each physician making a claim, based on the physician's customary fee and the prevailing fee in the community for that service in the previous year. Consequently, there is no uniformity in amounts paid by Medicare for a given service even among physicians in the same specialty and locality, unless they are all at the limit set by the prevailing fee. As a result, patients seeing different physicians may be liable for differing amounts for the same service, even when their physicians charge the same amounts.

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32. Projections by the Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services. See also J.P. Newhouse and others, "Where Have All the Doctors Gone?" *Journal of the American Medical Association*, vol. 247, no. 17 (May 7, 1982), pp. 2392-2396.

33. See testimony by Kevin M. Fickenscher, Director, Office of Rural Health, University of North Dakota School of Medicine, presented at a hearing before the Subcommittee on Health, Senate Finance Committee, December 6, 1985. See also published results from the Socioeconomic Monitoring System surveys conducted quarterly by the American Medical Association.

Further, at the time of service, in many cases neither physicians nor patients know what amount Medicare will approve. As a result, patients may not know what their out-of-pocket liability will be even if their physicians accept assignment, since patients are liable for 20 percent of an unknown amount. When physicians refuse assignment, the patient's uncertainty is even greater, because liability is then 20 percent of an unknown portion of the charge plus all of that portion of the charge that exceeds Medicare's approved rate.

CHAPTER III

PROPOSALS FOR CHANGING THE CURRENT REIMBURSEMENT SYSTEM

There is widespread dissatisfaction with the customary, prevailing, and reasonable (CPR) system, and increasing awareness that, with better incentives for physicians, Medicare enrollees' access to good health care might be maintained at lower cost, both to enrollees and to Medicare. There is less agreement, however, about what changes to make in Medicare's payment methods.

This chapter reviews basic approaches by which Medicare could pay for physicians' services and discusses the Administration's plans to retain but refine the CPR system for the near term, while developing fundamental reforms for the long run. Alternative methods of payment that could replace the CPR system are described in detail in Chapters IV through VI.

BASIC APPROACHES

The basic approaches that Medicare could use to pay for physicians' services are defined by the unit of payment:

- Per service provided (fee-for-service);
- Per case or condition treated (case-based);
- Per person treated for all medical needs during a specified period of time (capitation); or
- Per period of time at work (salary).

The salary approach is not discussed in this study, because it is not under consideration as a policy option at this time. Paying physicians by salary for services to Medicare enrollees would transform Medicare from a publicly funded insurance program into a public health service for the aged and dis-

abled, with physicians who treat Medicare enrollees serving as employees of the federal government. 1/

Fee-for-service payment systems--modifications of the CPR system and fee schedules--are emphasized in this study, for two reasons. First, any payment system that retained the service as the unit of payment would be a less radical change than one that substantially altered the unit of payment, so that it would be less disruptive and could be more quickly implemented. Second, service-based payment rates would likely be required even under other approaches--either as the foundation for more comprehensive payment rates, or as a residual payment system for services or population groups not covered by case-based or capitated systems.

As discussed in Chapter II, the CPR system is a fee-for-service payment mechanism that is evolving toward a set of location- and specialty-specific fee schedules anyway, as an increasing proportion of claims bump against the payment ceilings set by MEI-adjusted prevailing fees. The growing importance of the Medicare Economic Index, rather than physicians' charges, in determining annual increases in payment rates means that the incentives for fee inflation inherent in the CPR system are being weakened, but only very slowly. Further, the other problems with the CPR system discussed in Chapter II will remain, including incentives for a high volume of services, and fee differentials by service, specialty, and location that many analysts believe to be inappropriate. An additional problem is that the fee schedules that will evolve under the CPR system will reflect the structure of physicians' charges in calendar year 1971, since MEI-adjusted prevailing fees simply inflate Medicare's prevailing fees for 1973 (which were based on actual charges in 1971) by the increase in the index since that time. There have been substantial changes since then in medical technology, in the supply of physicians, and in the distribution of the Medicare population, however, that have probably altered appropriate fee differentials.

Hence, if the Congress chooses to implement a Medicare fee schedule, it might prefer one that would reflect current circumstances, rather than accepting the schedules that will evolve under the CPR system. A schedule

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1. Many physicians work for salary, either as employees of the federal government (the Public Health Service and the Veterans Administration), as hospital employees, or as employees of group practices. Except for the small share of payments made to risk-based health maintenance organizations and other prepaid medical plans, however, Medicare pays for almost all other physicians' services provided to Medicare enrollees on a fee-for-service basis regardless of how physicians are paid by the organizations where they are employed. One exception is for routine kidney dialysis, which is paid for by a monthly capitation rate.

could be developed that would ignore Medicare's current payment structure where current rates were thought to be inappropriate. Payment for services could be set below current rates in instances where there was evidence that rates were far in excess of costs, for example. Differentials in payment rates between specialties and across localities could be reduced where appropriate, and be set to reflect cost differences more accurately.

A fee schedule would not in itself, however, reduce current incentives for providing a high volume of services. Because it would still be a fee-for-service method, physicians' financial incentives would be to encourage patients to obtain all services with any potential net benefit to them. There would be no financial incentives inherent in the payment method to induce cost-conscious care by physicians. Consequently, external controls--both on individual physicians and on aggregate spending for physicians' services--would likely be necessary to limit growth in the volume of services. Such controls have been used with success in other countries in conjunction with fee schedule payment systems (see Chapter IV and Appendix A).

Alternatively, incentives to limit volume could be created as an inherent part of the payment system by basing payment on comprehensive packages of services, but such packages also carry with them the risk of inadequate care for patients. Within a package, physicians would have incentives to eliminate services with few benefits because this would reduce costs, thereby increasing profits on the package. On the other hand, because it is not always clear what services are required, some physicians might err by eliminating medically necessary services as well, with adverse consequences for patients.

Some packaging of services could be accomplished even in a service-based payment system, by combining payment for visits and tests related to some therapeutic procedures with Medicare's reimbursement for the procedure. But packaging in a case-based system would typically be more comprehensive than could be obtained under a service-based payment system, because more than one major procedure might be included in the package. Case-based payment packages, though, would probably have to be limited to inpatient episodes, where the admission would define the case or episode of care. Therapeutic procedure packages could be defined whether the procedures were performed on an inpatient or an ambulatory basis. In either instance, incentives would exist to shift services outside the package, where possible, to increase total reimbursement.

A capitated payment for all covered services would be the most comprehensive package, with no possibility for out-of-package billing. Organizations receiving payment on a capitated basis would have incentives to

minimize all forms of care within the limits of acceptable medical practice. Such organizations would serve as insurers who would either provide health care to Medicare enrollees directly or pay for services provided by others.

Some analysts view capitation as the ultimate solution to the problem of rapidly escalating health care costs, because it would create the most desirable set of incentives for the insuring organizations--so long as there was effective competition to ensure that those who provided inadequate services were eliminated. Without effective competition, enrollees' access to good health care could be seriously eroded. Even with competition, enrollees could be adversely affected during the period before they were able to change insurers. Further, in most capitation systems, an enrollee's choice of providers would likely be restricted.

THE ADMINISTRATION'S PROPOSALS

The Administration has expressed a clear preference for expanding the number of enrollees in capitated payment systems in the long run, while making refinements to alleviate the worst problems in the CPR system in the short term. 2/ It opposes both Medicare fee schedules and expansion of the prospective payment system to include physicians' services (a case-based approach), partly on the grounds that these approaches would be "inherently regulatory." Further, the Administration contends that fee schedules would provide no significant improvement over the CPR system, and that serious (and perhaps unresolvable) implementation issues would surround expansion of the prospective payment system to include all physicians' inpatient services. Meaningful reform, the Administration maintains, can be achieved only by increasing consumer choice, competition, and capitation.

The refinements to the CPR system proposed by the Administration would be accomplished by regulation. They include the following:

- A technical adjustment to the MEI would be made, by substituting a rental equivalence measure for the homeownership component

2. Discussion of the Administration's proposals is based on testimony given by Henry Desmarais, Acting Deputy Administrator, Health Care Financing Administration, before the Subcommittee on Health, Senate Finance Committee, December 6, 1985, and on the Administration's 1987 budget submissions. The Administration's proposal to limit the price and the frequency of replacement for prosthetic lenses following cataract surgery is not discussed, because it has already been enacted as part of the Consolidated Omnibus Budget Reconciliation Act of 1985.

now used in that index. This would reduce the index value, so that only a small increase in MEI-adjusted prevailing fees would be made in fiscal year 1987. 3/

- Carriers for Supplementary Medical Insurance would be instructed to examine payment rates for selected services that have become less costly to provide because of automation or other technological change. Carriers initially are to focus on payments for cataract surgery, for bypass operations, and for pacemaker implants. Administration estimates indicate that rate reductions of about 10 percent, on average, will result.
- Payment rates for standby anesthesia services would be reduced by paying only for the anesthesiologists' time and not for the services that would have been rendered had general anesthesia been required.
- Payment for assistant surgeons would be denied for specified procedures unless justified by extraordinary circumstances.

The Congressional Budget Office's estimates of the savings from these proposals are shown in Table 14.

The Administration also has proposed legislation that would expand the capitation options available to Medicare enrollees, by permitting them to use a Medicare voucher to purchase private insurance coverage that was actuarially equivalent to the Medicare package. Further, the Administration is considering demonstration studies of an areawide capitation approach ("carrier capitation"), in which selected agencies would agree to ensure that Medicare benefits were provided to all enrollees in a given geographic area in return for a per-person payment determined in advance.

The remainder of this section examines some of the Administration's proposals for refining the CPR system. Administration proposals for expanding Medicare enrollment in capitated systems are discussed in Chapter VI.

There are two components to the Administration's proposal to adjust the Medicare Economic Index. First, future increases in the MEI would be based on the new index using rental equivalence in place of homeownership, to eliminate the sometimes volatile and unrepresentative effects of

3. Before enactment of the Consolidated Omnibus Budget Reconciliation Act of 1985, CBO estimated that the MEI increase would be 0.8 percent with the technical adjustment, and 3.2 percent without it.

mortgage rate changes on the index. Second, the new (lower) index value would be used to correct for past increases in the MEI--and hence in payment rates--that would not have occurred had the rental equivalence component been used all along. The two components are separable--future increases could be based on the adjusted index, with or without correction for past increases.

The Administration's intention to correct for past increases in the MEI as part of its proposed revision of the index would move the CPR system more rapidly toward a fee schedule based on MEI-adjusted prevailing fees, thereby more quickly weakening the incentives for fee inflation in the system. Without the MEI revision, CBO estimates that about 50 percent of

TABLE 14. ESTIMATED SAVINGS FROM SELECTED ADMINISTRATION PROPOSALS, FISCAL YEARS 1987-1991
(In millions of dollars)

Administration Proposal	Annual Savings from CBO Baseline					Cumulative Five-Year Savings
	1987	1988	1989	1990	1991	
Adjust MEI a/	120	200	240	280	310	1,150
Reduce Payment for Overpriced Procedures	100	110	120	130	150	610
Reduce Payment for Standby Anesthesia Services	60	60	70	80	90	360
Deny Payment for Unnecessary Assistants at Surgery	10	20	30	40	50	150
Total	290	390	460	530	600	2,270

SOURCE: Congressional Budget Office.

a. These estimates assume that the differential in prevailing fees for participating and nonparticipating physicians established under the Consolidated Omnibus Budget Reconciliation Act of 1985 will continue, but that the different prevailing fees would be increased by the same percentage amount following the MEI adjustment.

approved charges would be set by MEI-adjusted prevailing fees in fiscal year 1987. With the adjustment, the share of approved charges set by MEI-adjusted prevailing fees would increase to 56 percent (see Table 15).

Proposed reductions in payment rates for selected overpriced procedures would begin to address complaints about inappropriate fee differentials among services, in a very limited way. Only three generic procedures would be targeted, although other specific services and some service categories are generally believed to be overpriced. Targeting only a few procedures rather than implementing a comprehensive restructuring of payment rates could be seen as unfair to the physicians most affected, but the proposed reductions in payment rates are only a fraction of the reductions that would, by some estimates, be justified on the basis of resource costs (that is, the costs to physicians of providing the service).

TABLE 15. CBO PROJECTIONS OF PERCENT OF ALLOWED AMOUNTS SET BY PREVAILING FEE SCREENS, WITH AND WITHOUT TECHNICAL ADJUSTMENT TO THE MEDICARE ECONOMIC INDEX, FISCAL YEARS 1987-1991

	1987	1988	1989	1990	1991
Without Technical Adjustment to MEI					
Percent of Allowed Amounts at the Unadjusted or MEI-adjusted Prevailing Fee	63	67	69	71	72
Percent of Allowed Amounts at the MEI-adjusted Prevailing Fee	50	52	53	54	56
With Technical Adjustment to MEI					
Percent of Allowed Amounts at the Unadjusted or MEI-adjusted Prevailing Fee	68	70	71	72	74
Percent of Allowed Amounts at the MEI-adjusted Prevailing Fee	56	57	58	58	59

SOURCE: Congressional Budget Office based on information on charges for 110 common services reported by the Health Care Financing Administration.

NOTE: These projections assume that the proportion of allowed amounts equal to submitted charges will be constant, at 14.5 percent.

If resource cost estimates developed by researchers at the Harvard School of Public Health were used, for example, cataract extractions would be paid at only 14 percent of current rates, pacemaker implants at 24 percent of current rates, and bypass surgery at 40 percent of current rates (see Table 16). If such rate reductions were implemented, Medicare's payments for these services would be about 20 percent of current payments, on average; under the Administration's proposal, new payments would average about 90 percent of current levels. The methods used to develop the Harvard estimates of resource costs have been criticized, however, for placing too much weight on the time required to do the procedure and too little weight on other factors such as skills required and risks incurred.

TABLE 16. COMPARISON OF RELATIVE VALUES CALCULATED FROM MEDICARE'S ALLOWED AMOUNTS AND ESTIMATES OF RESOURCE COSTS, FOR SELECTED SERVICES, 1983

Service	Average Allowed Amount a/	Allowed Amounts if Based On Resource Costs Estimated by Stason	Stason's Resource Cost-Based Amounts As a Percent of Current Allowed Amounts
For Cardiovascular Surgeons			
Base Service: Initial Office Visit	80	80	100
Coronary Artery Bypass	3,000	1,200	40
Pacemaker Implant	1,060	256	24
For Ophthalmologists			
Base Service: Initial Eye Examination	50	50	100
Cataract Extraction	1,100	150	14

SOURCE: Adapted by the Congressional Budget Office from testimony by William B. Stason, Harvard School of Public Health, before the Subcommittee on Health, Senate Finance Committee, December 6, 1985.

a. Average amounts allowed by Medicare carriers for this service in 1983.

Further, most analysts would argue that although costs, broadly defined, are an important component of payment rates, other factors--such as the supply of physicians with the requisite skills relative to the demand for their services--must also be considered. 4/

The Administration's proposal to require carriers to reduce payments for standby anesthesia would make uniform a practice that is followed by a few carriers now. The rationale behind the proposal is that anesthesiologists' responsibilities are reduced when they are only standing by, compared with instances when they actually administer general anesthesia, and that Medicare's payment rates should be based on actual services performed. Payment rates for the services of anesthesiologists have two components--time units that reflect the length of time the anesthesiologist was present, and base units that vary depending on the procedure performed and the complexity of the case. Most carriers currently do not differentiate between instances in which general anesthesia is administered and those in which an anesthesiologist is only standing by in the event general anesthesia is required.

The Administration's proposal to deny payment for assistants at surgery unless medically required would expand current utilization review requirements, which already require carrier review prior to payment for claims for assistants at cataract surgery. Until now, carriers have had considerable discretion in establishing criteria to determine whether the services of assistants at surgery were reasonable and necessary. Some have defined medical necessity very restrictively, while most carriers have paid for assistants at surgery even during routine operations if such use was common in the community.

The Administration is also planning to develop more rigorous guidelines for carriers to use in conducting their postpayment utilization reviews. Carriers currently examine physicians' claims histories to identify those with unusually heavy service patterns, but in many instances the methods used are not effective at identifying inappropriate patterns. In some cases, for example, the types of physicians grouped together are so diverse that the individual physicians identified for further review are specialists treating very sick patients, for whom heavy use of services can be readily justified. Carriers thus are able to satisfy HCFA's requirements for utilization review with little effort and little result. More effective utilization review

4. See Chapter V in Jack Hadley and others, "Final Report on Alternative Methods of Developing a Relative Value Scale of Physicians' Services," Project Report No. 3075-07 (Urban Institute, Washington, D.C., October 1984).

programs, while reducing costs for program benefits, would increase administrative expenses. No apparent provision for these increased administrative costs has been made in the Administration's budget request.

The Administration is also considering ways to reduce the number of specialties and pricing localities identified for separate prevailing rates within each carrier's jurisdiction, not only to simplify administration of payments but also to create a more consistent basis for the differentials that would remain. It is unknown whether Medicare's costs would increase or fall as a result of combining larger physician groups to define prevailing fees. These changes apparently would not involve any attempt to modify CPR-generated fee differentials between the specialty groups that were retained or between different carrier jurisdictions. As a result, the substantial differentials that exist currently would remain, although the size of current differentials may not be justified by costs or any other factors except past practice.

CHAPTER IV

FEE SCHEDULES

The Congress could substitute a fee schedule for Medicare's customary, prevailing, and reasonable (CPR) method of setting physicians' reimbursement rates. This might leave the unit of payment--the service--unchanged, but would alter the method of determining payment rates. Under a fee schedule, Medicare might pay the lesser of the fee schedule rate or the submitted charge, but the maximum payment for any given service would be uniform for all physicians, at least in the same specialty and location. Under the CPR system, each physician may be paid a different amount for a given service--physician-specific fee schedules, in effect.

Modifying the CPR system by introducing a fee schedule would be a relatively straightforward change. Over time, the Medicare Economic Index, which is currently used to limit growth in prevailing fees under the CPR system, will affect a larger proportion of physicians' claims, so that the CPR system will eventually evolve into a set of specialty- and location-specific fee schedules anyway. Differences by procedure, specialty, and location in the fee schedule that will evolve under the CPR system, however, will not necessarily be systematically related to factors, such as costs, that the Congress might want them to reflect.

Implementing a fee schedule would not preclude more far-reaching changes in the way Medicare pays for physicians' services at a later date and could, in fact, relieve pressures for making changes that were ill-considered--permitting Medicare to modify its payment methods for physicians incrementally, after careful consideration. In addition, there are long-standing examples of the use of fee schedules both in the United States and in other countries from which to learn, whereas other approaches are largely untried. Fee schedules are the dominant method of paying for physicians' services in other countries with health care delivery systems similar to that of the United States, such as Canada and West Germany. Despite the incentives for high service volume inherent in fee schedule payment systems, both Canada and West Germany have successfully controlled volume increases through a combination of reviewing use of services and placing caps on total spending under their health insurance programs (see Appendix A).

A fee schedule might differ from the CPR system in several ways, and this chapter discusses some alternatives. The definition of some services might be changed. The method of setting payment rates would certainly be different. Requirements for assignment of benefits might be altered. Finally, stronger volume controls could be introduced.

UNIT OF PAYMENT

Under a fee schedule, the unit of payment could continue to be the services defined by HCFA's Common Procedure Coding System (HCPCS). Medicare only recently imposed this common coding system on all its carriers, and another change would not likely be well received by carriers in the near future. On the other hand, many analysts believe that some coding changes would be desirable because the current coding system permits inconsistent billing by physicians, code creep, and unbundling of services, perhaps resulting in higher costs.

If a fee schedule were implemented, uniform payment rates would be established for each service code but, unless physicians were consistent in their use of the service codes, Medicare's effective payment rates could be quite different among physicians. For example, visits are poorly defined under HCPCS, and there is evidence that physicians differ in how they use the codes. Even for procedures, which are more clearly defined, physicians differ in whether they bill for a visit along with the procedure and in whether they bill for any follow-up visits associated with the procedure.

Three specific coding changes are discussed: collapsing the number of distinct codes recognized for payment for certain generic services, redefining visits by either time or content, and packaging services associated with certain therapeutic procedures together for reimbursement. 1/

Collapse the Number of Distinct Codes for Certain Generic Services

The number of distinct codes in the American Medical Association's Common Procedural Terminology (CPT-4) system (on which HCPCS is based) is large--more than 7,000 in 1985, up from about 2,000 in 1966. There are

1. See Janet B. Mitchell and others, "Alternative Methods for Describing Physician Services Performed and Billed," Report No. 84-4 (Health Economics Research, Chestnut Hill, Massachusetts, May 1984), for a more detailed discussion of these approaches.

11 codes for office visits. A set of 10 or more distinct codes for a single generic diagnostic or surgical procedure is not uncommon.

Although the rationale for the proliferation of codes is to enable physicians to describe accurately the services they provide, people concerned with cost containment have criticized the CPT-4 system for allowing physicians too much latitude in billing. By reducing the number of distinct codes for a given generic service, the potential for inadvertent or deliberate code creep by physicians would be reduced, perhaps resulting in some reduction in the growth of costs. Administration of payments by carriers might be simplified somewhat as well, once sets of services to be collapsed had been determined, although the significance of this effect would depend on the extent to which the number of codes was reduced.

The services to be combined would need to be chosen carefully, however, to ensure that the same payment rate was appropriate for all of the services collapsed into one. Otherwise, physicians might be reluctant to perform underpriced services. Medical judgment would be required to determine which services within a generic group were sufficiently different to require a separate code and payment rate, and agreement on a reduced set of services could be difficult to achieve.

Redefine Visits

Distinctions among visit categories are poorly defined under the CPT-4 system, with no specifications concerning time and unclear specifications on content (see Table 17). As a result, physicians apparently differ in how they interpret current visit definitions. For example, one survey found that a "limited" office visit for general practitioners lasted only three-quarters as long as the same type of visit for internists, on average. 2/ The potential for inconsistent billing and code creep might be reduced if visits were defined by time. Alternatively, office visit packages might be defined based on the patient's diagnosis, with appropriate ancillary services included in a single payment rate for visits to reduce costs caused by unbundling of services.

Time-based Visits. Payment for visits might be determined on the basis of time, with a fixed amount paid for the first 10 minutes, for example, and (perhaps declining) amounts paid for each additional 10-minute increment. This method could provide an unambiguous definition of each visit, reducing the potential for inconsistent billing and code creep, although it would be necessary to specify how to count time spent with the physicians' assistants

2. Robert C. Mendenhall, *Medical Practice in the United States* (Princeton, New Jersey: Robert Wood Johnson Foundation, 1981).

TABLE 17. CPT-4 DEFINITIONS OF CATEGORIES FOR PHYSICIAN OFFICE VISITS FOR NEW AND ESTABLISHED PATIENTS

Level of Service	Definition
Minimal a/	A level of service supervised by a physician but not necessarily requiring his presence.
Brief	A level of service pertaining to the evaluation and treatment of a condition requiring only an abbreviated history and examination.
Limited	A level of service pertaining to the evaluation of a circumscribed acute illness or to the periodic reevaluation of a problem including an interval history and examination, the review of effectiveness of past medical management, the ordering and evaluation of appropriate diagnostic tests, the adjustment of therapeutic management as indicated, and the discussion of findings and/or medical management.
Intermediate	A level of service pertaining to the evaluation of a new or existing condition complicated with a new diagnostic or management problem not necessarily relating to the primary diagnosis that necessitates the obtaining and evaluation of pertinent history and physical or mental status findings, diagnostic tests and procedures, and the ordering of appropriate therapeutic management; or a formal patient, family, or hospital staff conference regarding patient medical management and progress.
Extended	A level of service requiring an unusual amount of effort or judgment including a detailed history, review of medical records, examination, and a formal conference with patient, family or staff; or a comparable medical diagnostic and/or therapeutic service.
Comprehensive	A level of service providing an in-depth evaluation of a patient with a new or existing problem requiring the development or complete reevaluation of medical data. This procedure includes the recording of a chief complaint(s) and present illness, family history, past medical history, personal history, system review, a complete physical examination, and the ordering of appropriate diagnostic tests and procedures.

SOURCE: American Medical Association, *Current Procedural Terminology*, 4th ed. (AMA, Chicago, Illinois).

a. There is no "minimal visit" category for new patients.

and nurses. Patients would be able to verify that they were billed only for the time they spent with the physician or assistants, in contrast to the current system under which patients have no clear idea whether they received a "limited" or an "intermediate" visit. Physicians might increase reimbursements by spending more time with each patient when their appointment books were not filled, but they are able to do that now, without the checks by both patients and carriers that visits defined by time would permit.

Office Visit Packages. Packages of services might be defined to replace the current visit codes, where visit packages would include ancillary services provided or ordered as a result of the visit. Criteria would need to be established to classify patient visits for payment purposes, though, because of the tremendous variation in medical problems encountered in the office. Visits could be classified by visit type (initial or follow-up), by reason for visit, by diagnosis, or by some combination of these. One system for classifying office visits based on diagnosis and physicians' time--known as ambulatory visit groups--is being developed, but this system does not yet account sufficiently for variation in appropriate services within each group.3/ Further development is under way, with the likelihood that the number of categories defined by the system will increase from 154 to about 400. It is uncertain, however, whether the potential benefits from this system would be large enough to justify the considerable expansion in visit codes that would apparently be required.

Office visit packages would generate both the advantages and the disadvantages of packaging. The principal advantage is that physicians would have financial incentives to reduce ancillary tests and other services, because these costs would come out of the physician's payment for the office package. One disadvantage is that some physicians might inadvertently reduce medically necessary services as well as those that were of little or no value. In addition, there would be financial incentives to shift services out of the office visit package--for example, to refer patients to specialists (so long as consultants' services were excluded from the package), or to request follow-up visits for services that might have been provided in one office visit. Further, if the classification system was not sufficiently sensitive to real differences in severity among types of visits--that is, if packages that were not homogeneous in terms of the services required were paid at the same rate--physicians treating sicker patients would be penalized and might become reluctant to accept them.

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3. R.B. Fetter and others, "Ambulatory Visit Groups: A Framework for Measuring Productivity on Ambulatory Care," *Health Services Research*, vol. 19, no. 4 (October 1984), pp. 415-437.

Package Services for Certain Therapeutic Procedures

Some or all of the services usually associated with a single therapeutic procedure could be incorporated into a package for payment purposes. Therapeutic packages could be limited to procedures for which there was medical consensus on the appropriate services required. 4/ A fixed package payment could be made to the primary physician regardless of the resources actually used.

A therapeutic package could vary in comprehensiveness. The package might include only the services and tests provided or ordered by the primary physician, such as visits related to the procedure, laboratory tests, and the procedure itself. A more comprehensive package might also include the services of supporting physicians such as radiologists, anesthesiologists, pathologists, and assistant surgeons. Finally, the most comprehensive package would include facility costs, such as hospital or outpatient department charges, in addition to physicians' services. Physicians' financial incentives to limit services would be stronger with a more comprehensive package, but financial risks to physicians from inadequate payment and risks to patients from inadequate care would also be larger.

In the most comprehensive package--covering all physicians' and facility costs--the physician would have strong financial incentives to perform the procedure in the least costly site and to minimize the use of consultants and tests. Physicians could face tremendous financial risks, though, in the event that complications developed and patients had to be hospitalized for an extended period, for example. The risks that patients might receive inadequate care would also be high under this option because the costs of all services and supplies would have to be paid by the primary physician.

If the package were limited to physicians' services, including consultants, the primary physician might choose, sometimes inappropriately, to interpret patients' x-rays rather than consult a radiologist, for example, or to perform a difficult colonoscopy rather than call in a gastroenterologist, with adverse effects for patients. This approach would have the same benefits and problems as paying physicians according to diagnosis-related groups (DRGs), discussed in Chapter V. Packaging for therapeutic procedures could apply, however, regardless of place of service, and could be limited to procedures for which appropriate physicians' services were reasonably uniform so that physicians' risks of underpayment would be small.

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4. Diagnostic procedures would not generally be suitable candidates for packaging, because the underlying condition and the resources necessary to identify it are uncertain.

The package with the least financial risk for the physician, the least risk of inadequate care for the patient, and the least potential for slowing the growth in costs would be a package that included only services provided by the primary physician. Limited packaging of this sort already exists; some surgeons include pre- and postoperative visits in their charges for surgery, for instance. This practice varies among physicians, however, and Medicare has no uniform requirements. If a fee schedule were implemented, it would be important to specify what services were to be incorporated in the fee for specific procedures, to ensure consistent payment for all physicians.

PAYMENT RATES

Medicare could take an active role in setting fee differentials and annual increases in fees under a fee schedule, rather than accepting the differentials and increases that result under the CPR system. Payment differentials thought to be inappropriate could be altered by service, specialty, and location; the automatic and inflationary link between Medicare's payment rates and physicians' submitted charges for the previous year could be cut.

A fee schedule could be implemented quite soon if the schedule of payment rates was based, initially at least, on Medicare's allowed amounts or some other representative measure of current charges. Adjustments could be made over time to a charge-based fee schedule for fees that were thought to be inappropriate. Alternatively, implementation could be delayed until a comprehensive schedule of revised rates had been developed.

It is helpful for the following discussion to think of a fee schedule as having two components:

- A relative value scale (RVS) giving each service a weight to indicate its value relative to any other service, where the weights might differ by specialty for some services; and
- A monetary multiplier (or location-specific multipliers) that would convert the RVS weights into payment rates.

The RVS would likely be uniform nationwide, since the relative value of services would generally be the same for all regions. 5/ Location-specific

5. The correlation between an RVS based on average submitted charges nationwide and RVSs based on submitted charges by individual carriers was very high, using data from HCFA's 1984 Medicare Annual Data Procedure file. Correlation coefficients were 0.96 or above in all instances but two. For Hawaii, the coefficient was 0.94; for southern California, the coefficient was 0.90. A coefficient of 1.00 indicates perfect correlation.

multipliers could be used to account for differences in the level of costs or the supply of physicians across regions.

Once a fee schedule was in place, the monetary multipliers could be adjusted as frequently as necessary to account for inflation, while the more complex task of recalibrating the RVS weights could be done less frequently, as required by changes in medical technology or other considerations. 6/ The newly authorized Physician Payment Review Commission could recommend changes in both the RVS weights and the monetary multipliers, just as the Prospective Payment Assessment Commission advises on changes to the PPS. (The Physician Commission was authorized by the Consolidated Omnibus Budget Reconciliation Act of 1985, but no funding has yet been provided for it.)

The Relative Value Scale

Any one or a combination of three bases could be used to develop a relative value scale--resource costs, charges, or the judgment of a panel of experts. As discussed in Chapter II, it would be desirable for payment rates to mirror costs except where Medicare wanted to influence physicians' decisions. In some instances, for example, fees might be set below costs to discourage use of procedures that were ineffective or that were no more effective than less costly alternatives. In areas where the supply of physicians was inadequate, fees might be set higher relative to costs than in other areas to encourage physicians to locate in the underserved areas.

Hence, while costs would not be the only consideration, they would be an important determinant of the appropriate payment rates in a fee schedule. Estimating the resource costs necessary to produce each of the 7,500 distinct services reimbursed by Medicare would be a formidable task, though. In fact, one study submitted to the Health Care Financing Administration concluded that it is probably not feasible to construct a comprehensive schedule of costs by measuring resource costs for each service directly. 7/

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6. This is analogous to the rate-setting process under the prospective payment system for hospitals, where each diagnosis-related group has a weight assigned to it that represents its relative value, while the basic payment is determined by applying location-specific multipliers times the weight. (Other adjustments for factors such as the size of any teaching program are also made.)

7. Jack Hadley and others, "Final Report on Alternative Methods of Developing a Relative Value Scale of Physicians' Services," Project Report No. 3075-07 (Urban Institute, Washington, D.C., October 1984).

An alternative method--one that would recognize the relevance of factors other than resource costs at the outset--would start from the current charge structure and "back into" an appropriate schedule of rates by making selective adjustments based on consensus by a panel of experts as to which services would be inappropriately priced at current rates. One consideration in determining whether a fee was appropriate would be whether the experts believed that the service would be unusually profitable or unprofitable. Estimates of costs for a few key services could be obtained and used as benchmarks by the experts to help in this assessment. 8/

The charge structure used as the initial base for this process could be average allowed amounts under Medicare or a representative measure of submitted charges (the mean or the median of billed amounts, for example). Previous studies have shown that RVSs developed from alternative charge bases are highly correlated, whether they are derived from billed amounts, allowed amounts, or prevailing fees. 9/ There are some differences among these bases, however, that could appreciably alter the effects on particular specialty groups. For example, a fee schedule based on Medicare's allowed amounts would pay relatively less for hospital visits, compared with a schedule based on average amounts billed to Medicare (see Table 18). Because hospital visits comprise a large part of the services provided by internists, these physicians would fare better under a fee schedule based on average billed amounts than one based on average allowed amounts (see Appendix B).

However the RVS was obtained, the fee schedule derived from it could be scaled to be budget-neutral or to increase or reduce total payments by any desired amount. This would be accomplished by setting an appropriate value for the monetary multiplier.

An important issue to resolve in establishing an RVS would be whether given services differ--and therefore deserve different weights--depending on the physician's specialty. This issue primarily concerns visits, since visits are a major source of billings for physicians in most specialties. 10/ Billing

8. In January 1986, the Health Care Financing Administration contracted with the Harvard University School of Public Health, in conjunction with the American Medical Association, to develop a relative value scale along these lines. Completion was scheduled for mid-1988. Subsequently, as part of the Consolidated Omnibus Budget Reconciliation Act of 1985 (which was signed into law in April 1986), the Congress instructed the Secretary of the Department of Health and Human Services to develop a relative value scale for physicians' services by July 1, 1987.

9. See Chapter I, Section E, in Hadley and others, "Final Report on Alternative Methods of Developing a Relative Value Scale of Physicians' Services."

10. The specialties of radiology, anesthesiology, and pathology do not typically have visit charges.

for procedures is more likely to be specialty-specific. (Lens procedures, for example, are provided almost exclusively by ophthalmologists).

If the costs of the resources actually used to provide each service were the only consideration, payment rates for all services would be higher

TABLE 18. MEDICARE'S ALLOWED AMOUNTS AS A PERCENT OF SUBMITTED CHARGES, BY MAJOR SERVICE GROUP, 1984

Service Group	Allowed Amounts for Each Service Group as a Percent of: Submitted Charges for Each Service Group	Total Allowed Amounts for All Services
All Services a/	77.2	100.0
Office Visits	79.7	11.2
Hospital Visits	75.0	13.7
Emergency Room Visits b/	64.1	0.5
Home Visits	73.1	1.2
Consultations	79.1	3.5
Surgical Procedures	77.6	35.8
Nonsurgical Procedures	77.7	34.1

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider and Procedure files.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. The ratio for emergency room visits is unusually low because of HCFA regulations limiting payments for certain services rendered in hospital outpatient departments to 60 percent of the prevailing fee for similar services rendered in physicians' offices.

when provided by specialists than when provided by generalists, because specialists' training costs are higher. Higher rates would be justified on this basis, however, only for physicians who had incurred the additional training costs and were board-certified. Although higher rates might also be paid to physicians who were board-eligible but not certified, this would be more difficult for carriers to administer. Further, many analysts would argue that education alone, without board-certification of competence, should not merit higher payment rates. 11/ The proportion of physicians paid specialty rates by Medicare would drop if the higher rates were paid only to board-certified physicians, since some physicians who are not board-certified currently bill as specialists. In 1983, only 56 percent of physicians claiming a specialty were certified in that specialty (see Table 19). Further, to achieve consistency across the country, Medicare would have to impose common standards about what specialties to group together for payment purposes, and what differentials between the specialty groups would be appropriate. The number of distinct specialties currently recognized for payment differentials varies from one carrier to another.

Alternatively, the costs of providing a given service might be based on the minimum resources required to provide the service rather than the resources actually used. The costs of performing a pacemaker implant, for example, could reflect the training costs of a general surgeon rather than the higher training costs of a thoracic surgeon, whose specialized skills are generally not required for this procedure. Under this approach, specialty differentials for well-defined procedures would be eliminated; a single rate would be set at a level appropriate for the least costly physician specialty generally competent to perform the procedure. This approach might, however, make insufficient allowance for the quality of judgment required to determine whether a procedure was required, while compensating adequately for the manual skills necessary to do the procedure. Further, cases where complications were likely to develop might require a more highly trained physician.

The issue with respect to visits is more complicated, because the services provided are not as well defined as they are for procedures. The services obtained during a visit with a specialist may or may not be more

11. A physician is board-certified in a specialty after passing an examination on the subject that is administered periodically by a national board of examiners. A physician is board-eligible--that is, eligible to take the examination--upon completion of the graduate medical education (residency training) required by the board.

TABLE 19. PERCENT OF PHYSICIANS CERTIFIED IN THEIR SPECIALTY, 1983

Specialty	Percent Certified
Generalists a/	
Family practice	60
Internal medicine	47
Pediatrics	54
Nonsurgical Specialists	
Allergy	25
Cardiology	75
Dermatology	73
Gastroenterology	78
Nephrology	N.A.
Neurology	53
Physical medicine	51
Pulmonary	73
Psychiatry	46
Surgical Specialists	
General surgery	50
Otolaryngology	68
Neurosurgery	60
Gynecology	58
Ophthalmology	71
Orthopedic surgery	67
Plastic surgery	61
Colon and rectal surgery	58
Thoracic surgery	69
Urology	71
Radiology	86
Anesthesiology	44
Pathology	71
All Physicians Claiming a Specialty	56

SOURCE: Congressional Budget Office from data in Mary Ann Eiler, "Physician Characteristics and Distribution in the United States" (American Medical Association, Chicago, Illinois, 1984).

NOTE: N.A. = not available.

a. General practice is not included in this table, since there is no specialty certification for general practitioners.

complex than services obtained from a generalist during a visit of the same type, since surveys indicate that specialists often provide primary care. 12/

One option that could help to dissuade Medicare enrollees from using specialists when their extra skills were not required would be to pay specialty rates only for patients who were referred to a specialist by a primary care physician. Without a referral, Medicare could reimburse only at the rate allowed for generalists. 13/ As proof, specialists could be required to attach referral cards from referring physicians to their insurance claims. Primary care physicians might include not only general and family practitioners, but also general internists, pediatricians, and perhaps gynecologists. Physicians practicing in specialties excluded from the definition of primary care would likely object to this approach, however, since it would reduce demand for their services. Further, Medicare enrollees who have used specialists as their primary care physicians would either have to change physicians or face higher out-of-pocket costs for care.

Another option would be to eliminate specialty differentials, and to define visits by time. There is some evidence to indicate that Medicare's payment rates per unit of time are already similar across physician specialties. 14/ Although payment per visit is higher for internists and specialists than for general and family practitioners, visits of a given type also tend to be longer with internists and specialists. Consequently, the financial effects on physicians of eliminating specialty differentials for visits could be very small if payment for visits were time-based. On the other hand, if specialty differentials were eliminated and current visit codes were retained, general and family practitioners might be paid more per hour than internists and specialists, because visits with general and family practitioners are typically shorter. (See Appendix B for estimates of the effects of alternative choices concerning specialty differentials.)

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12. Robert Mendenhall and others, "The Relative Complexity of Primary Care Provided by Medical Specialists," *Medical Care*, vol. 22, no. 11 (November 1984), pp. 987-1001.

13. The practice in some Canadian provinces is even more restrictive, in that no insurance reimbursement is made for specialists' services without proof of a referral from a primary care physician.

14. See Mitchell and others, "Alternative Methods for Describing Physician Services Performed and Billed," pp. 90-91.

The Monetary Multipliers

A relative value scale would become a fee schedule by setting a value for the monetary multiplier (or multipliers) to be applied to each item in the scale. Multipliers could be used to account for differences in costs both by location and over time. Selective adjustments to the multipliers might be made for some localities or for certain specialties where there was evidence of a shortage of physicians willing to treat Medicare enrollees at the approved rates. Further, the multipliers could be used as part of an effort to control use of services. (See "Quality and Volume Controls," below, for discussion of this last point.)

Multipliers might be set in a number of ways: unilaterally by Medicare, after negotiations with some designated physicians' group, or as the result of bidding by physicians. The discussion here is limited to ways that unilateral decisions could be made by Medicare, although informal discussions or negotiation with physician groups would doubtless be a part of that process, just as discussions with hospital associations are a part of the rate-setting process under the prospective payment system.

Unilateral decisions by Medicare would give Medicare greater control over costs than would the alternative approaches and would be straightforward to implement. In particular, multipliers that were set unilaterally could be scaled to be budget-neutral, or to increase or reduce Medicare costs by any specified amount (at least until altered by changes in the use of services initiated by physicians or their patients). Under the negotiating or bidding approaches, the effect on aggregate Medicare costs would be an outcome of the process. 15/

Formal negotiations on physicians' payment rates could be difficult for Medicare to implement, both because Medicare is only one of many payers, and because there is no physicians' group that would clearly be the appropriate one with which to negotiate. Further, a bargaining framework would not be necessary to permit physicians to express their dissatisfaction with Medicare's payment rates; dissatisfaction could be assessed informally based on the proportion of physicians who signed participating agreements and the assignment rates for nonparticipating physicians. This contrasts with the situation in other countries where no significant market for the services of physicians exists outside the public insurance system, so that formal negotiations are important as the only mechanism--short of refusing to practice medicine--by which physicians can voice their discontent.

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15. Budget-neutrality is assumed for the options discussed in Appendix B solely for analytical purposes, in order to identify the effects of changes in specialty or location differentials without the complication of a change in aggregate payment amounts.

Bidding systems are untried and would require further study or demonstration before they could be used to set Medicare's maximum payment rates. A variant might be combined with a fee schedule set by Medicare, however, to foster competition among physicians willing to accept payments below the fee schedule amounts. Physicians could submit bids each year that would show the minimum multiplier--and resulting fee schedule--that each physician would be willing to accept as payment in full as a participating physician. If Medicare publicized each physician's multiplier as a part of the information it provided about participating physicians, enrollees would have a convenient way to locate low-cost physicians, thereby not only avoiding balance-billing but also reducing their 20 percent coinsurance costs.

Differences by Location. An argument might be made for eliminating all differences by location in Medicare's payment rates for SMI services, because SMI premiums do not vary by location. If location differences were eliminated, however, the adverse effects on physicians and their Medicare patients would be substantial in high-cost areas such as New York, California, and Alaska. Because physicians' living and practice costs vary by region and (to a lesser extent) between urban and rural areas within regions, some differences in payment rates by location would probably be desirable to ensure adequate access for Medicare enrollees in all parts of the country. (SMI premiums, however, might be adjusted by location to reflect cost differences.)

One option would be to set multipliers for each payment locality (or some larger geographic area such as the state) so that aggregate Medicare payments by location would be unchanged by substitution of a fee schedule for CPR rates at the time of implementation (budget-neutral), although the allocation of payments among physicians would likely be different. This approach would perpetuate current differences in payment levels by location, however, even though they appear to be only partially related to costs.

An alternative would be to set location-specific multipliers based on an index of costs. These multipliers could be set to be budget-neutral nationwide, if desired, but would only coincidentally be budget-neutral by location. Location-specific multipliers could be designed to adjust Medicare's payment rates to reflect local differences in physicians' costs (just as DRG rates are adjusted for local wage costs under the prospective payment system, using the PPS wage index). Although no clearly appropriate location-specific index of costs exists at this time, the Medicare Economic Index provides a framework for developing one.

An appropriate index, or adjuster, would show how much more or less, relative to the national average, it would cost physicians locally to pay for a

representative package of goods and services normally required to practice. While some physicians in a locality might spend more or less than the amount implied by the adjuster, it would be unnecessary to adjust payment rates to reflect cost differences that resulted from physicians' different preferences--for more luxurious office space, for example. It might be desirable, however, to recognize that physicians in rural areas probably practice in an environment in which their ability to use practice resources efficiently is more limited than it is in urban areas, with the result that their total practice costs could be closer to those of urban practices than per unit costs for personnel and office space would indicate (see Chapter II for further discussion of this).

The weights attached to each expense category in the MEI implicitly define a representative package of resources used by physicians, once a per unit cost nationwide for each expense item is estimated. About 40 percent of gross revenues to physicians goes for practice expenses: 18.8 percent pays for nonphysician office personnel; 9.2 percent for office space; 4.0 percent for malpractice insurance; 3.6 percent for drugs and other office supplies; 2.8 percent for transportation; and 1.6 percent for miscellaneous expenses. The remaining 60 percent of gross revenues represents net physician income. 16/ Hence, one index to adjust physicians' payment rates could be obtained by combining:

- The ratio of local to national hourly costs for nonphysician personnel, with a weight of 0.188;
- The ratio of local to national commercial rental costs per square foot, with a weight of 0.092;
- The ratio of local to national malpractice insurance premium costs (for a given type and amount of coverage), with a weight of 0.040; 17/

16. These are the weights for the MEI used to determine increases in MEI-adjusted prevailing fees effective May 1, 1986, as announced by the Health Care Financing Administration in the *Federal Register*, vol. 50, no. 189 (September 30, 1985), pp. 39941-39946. The weights are revised each year, based on special studies conducted by HCFA.

17. The malpractice insurance premium in the adjuster should reflect the average cost for some standardized coverage, with the average calculated for a given mix of physician specialties--perhaps the national mix of specialties treating Medicare patients. It would not be appropriate to vary the location-specific adjuster based on differences by location in the mix of specialties represented, even though malpractice costs differ by specialty. Such costs should, instead, be reflected in the relative value scale.

- The ratio of local to national costs for a representative set of drugs and pharmaceutical supplies, with a weight of 0.036;

- The ratio of local to national costs for given transportation services, with a weight of 0.028;

- The ratio of local to national costs for miscellaneous expenses (using an all-items price index, for example), with a weight of 0.016; and

- The ratio of local to national living costs or earnings per capita, with a weight of 0.600.

In the last item, living costs would be used if the goal was to adjust payment rates to represent the same real net income per service for physicians across localities. Earnings would be used if the goal was to adjust payment rates to reflect the general level of earnings in the locality. Or, the ratio in the last item could be set to one if it was decided that Medicare's payment rates should not contribute to variation in physicians' net incomes by locality.

The difficulty in constructing this index is that information by locality is very limited for all of the components. The Consumer Price Index (CPI) provides some local cost information for overall living costs, for residential (but not commercial) rent, and for transportation. This information is available, however, only for 28 metropolitan areas or for four classes of urban areas (defined by population size) in each of the four census regions. It seems likely that payment rates would need to be adjusted at a finer level--by state, for example--because taxes, insurance regulations, and legal systems vary by state. 18/ It might be desirable to set payment rates separately for metropolitan and nonmetropolitan areas within each state, although the need for this is less clear, for reasons discussed above.

Ideally, the elements in the index would be based on data that are regularly collected by such organizations as the Bureau of Labor Statistics (BLS) or the Bureau of the Census, rather than on data from special surveys, which are costly to field and not reliably funded. The original PPS wage

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18. The jurisdictions of current Medicare carriers are statewide in most instances. Seven states have more than one carrier, but in four instances this occurs only because there is one carrier responsible for a single metropolitan area that crosses state boundaries. Hence, the carrier for Washington, D.C., also serves suburban counties in Maryland and Virginia. The carrier for Kansas City has a jurisdiction that is partly in Kansas and partly in Missouri. The states of California and Minnesota are each served by two carriers, while New York is served by three carriers.

index used area-level data on wages that are regularly collected by BLS, for example. That index was faulted, however, because the BLS data do not distinguish between part-time and full-time employment. Consequently, the Health Care Financing Administration developed a new index (to be implemented May 1, 1986) based on a survey of hospitals that treat Medicare patients. 19/ No provisions have yet been made for updating the new index.

The PPS wage index might serve adequately for two components of the adjuster--physicians' net income and wage costs for nonphysician personnel--that account for nearly 80 percent of physicians' costs. 20/ It probably would not account well for differences in the other 20 percent of costs--for office space, supplies, and malpractice insurance. For area-level data on commercial office rents and malpractice costs, periodic surveys would likely be necessary. 21/ The other components of costs for physicians are unlikely to vary significantly by location, so that a ratio of one might be used in the index for each.

Adjustment of pay rates using only an index of costs would ignore supply and demand considerations, though, so that rates in some areas might not be high enough to ensure adequate access for Medicare enrollees. As a result, selective adjustments unrelated to costs might be necessary in some locations.

Annual Increases. Although differences in payment rates by location might be adjusted periodically as new location-specific cost information was obtained, general increases in payment rates might be warranted more frequently in response to general inflation. For example, annual updates of payment rates might be based on increases in the Medicare Economic Index. Alternatively, annual increases might be based on increases in the GNP

19. There is a problem even with the new PPS wage index, though. Hospitals were generally unable to eliminate hours worked and wages and salaries paid to hospital residents and other hospital-based physicians, with the result that the estimates of hourly wage costs for nonphysician hospital personnel include varying amounts for physicians as well. The PPS wage index therefore is probably an overestimate of hourly wage costs for nonphysician hospital personnel, particularly in areas with teaching hospitals.

20. Using the PPS wage index, a value can be assigned to each county in the state. These county-level index values can be combined to obtain a single value statewide, or separate values for all metropolitan and nonmetropolitan areas in the state, by calculating a weighted average over all the counties in the area of interest. The weights could be based on the number of physicians treating Medicare patients or on the total of Medicare reimbursements in each county.

21. The Health Care Financing Administration currently conducts an annual survey of malpractice insurance costs for use in reweighting the MEI, but this survey might have to be expanded to yield reliable information by state. The only information currently available on commercial rents by location is from various real estate trade organizations.

deflator--a widely used indicator of economywide inflation--if the Congress wished to ensure that fee increases for physicians did not diverge from general inflation. There has been very little difference between increases in the MEI and the GNP deflator since 1975 when the MEI was first reported, however.

Annual increases in payment rates based on an index such as the MEI or the GNP deflator might be modified, though, if Medicare's payment rates did not keep pace with those of other payers. If Medicare's payment rates were generous relative to other payers, for example, Medicare costs could be reduced through lower annual increases without adversely affecting enrollees' access to care. On the other hand, if Medicare's payment rates were significantly below those of other payers, rate increases might have to be higher than would be justified by the index in order to maintain adequate access to care for enrollees.

Making the Transition from CPR to Fee Schedule Rates

Immediate substitution of a fee schedule for the CPR system could be disruptive, since Medicare payments to one-quarter or more of physician practices would fall by at least 10 percent, even if aggregate payments to physicians were unchanged (see Appendix B). If the Congress wished to smooth the transition by phasing in fee schedule rates, this could be done in at least two ways: the payment mechanisms could be blended for a transition period, or a "hold-harmless" provision for physicians could be implemented.

Blended Payment Rates. Fee schedule rates could be phased in using a system similar to the one used to introduce the prospective payment system; that is, payment for each service could be a blend of CPR and fee schedule rates, with the blend increasingly weighted toward the fee schedule until use of CPR rates was eliminated. For example, payment rates could be determined as follows:

Year	Payment Rates
1	75% of CPR + 25% of Fee Schedule Amounts
2	50% of CPR + 50% of Fee Schedule Amounts
3	25% of CPR + 75% of Fee Schedule Amounts
4	100% of Fee Schedule Amounts

This would mean less disruption for physicians but more complicated administration for carriers. Further, to the extent that fee schedule rates would induce desirable behavioral changes by physicians, these effects would occur more slowly than if the fee schedule were fully implemented without a transition period.

Hold-Harmless Provisions. Alternatively, physicians could be assured that there would be no reduction in their payment rates from the preceding year's levels as a result of implementing a fee schedule. Physicians could be paid fee schedule rates for all services except those for which fee schedule rates would be below Medicare's approved amounts for the previous year. In such instances, payment rates could be frozen at the previous year's approved amounts until fee schedule rates had increased to match them. This approach, however, would cost more than immediate implementation of fee schedule rates and could delay full implementation of the fee schedule for years. If that were a concern, the Congress could attach a "sunset" clause to the hold-harmless provision to limit its duration.

A less costly alternative would not only freeze CPR rates that were above fee schedule rates, but also delay increases to fee schedule rates for physicians whose CPR rates would have been lower. That is, rates for physicians who would receive higher payment under a fee schedule than under continuation of the CPR system could be increased to match the fee schedule gradually, over several years, rather than immediately in the year the fee schedule was implemented.

ASSIGNMENT AND ACCESS TO CARE

Medicare's potential for constraining fees and total costs for physicians' services is limited by concern about enrollees' access to care. Enrollees' access could be reduced in either of two ways: physicians could refuse to treat them at all, in favor of other population groups; or physicians could accept them as patients but refuse to accept assignment, so that enrollees would be liable for balance-billing. 22/ So long as Medicare's fees covered costs, however, it seems unlikely that many physicians would refuse to accept Medicare patients, since the number of physicians per capita is increasing and the Medicare population is a large and growing share of total patient load. Although access might be inadequate in certain localities or among certain specialties, this problem could be addressed by making selective increases in fee schedule multipliers. Moreover, widespread refusal by physicians to accept assignment is unlikely because of heightened competition for patients as a result of the growing supply of physicians. 23/

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22. Nonparticipating physicians who treat Medicare patients currently are free to make assignment decisions on a claim-by-claim basis, while participating physicians agree on a year-to-year basis to accept assignment for all their Medicare patients.

23. Alma McMillan, James Lubitz, and Marilyn Newton, "Trends in Physician Assignment Rates for Medicare Services, 1968-1985," *Health Care Financing Review*, vol. 7, no. 2 (Winter 1985).

Where assignment rates did fall, payment rates could be increased, since the decision to accept assignment is clearly affected by the relationship between Medicare's payment rates and physicians' actual charges.

Medicare's efforts to control costs would be less constrained by concern about enrollees' access if assignment rates could be increased by mechanisms other than increasing payment rates. Costs might rise somewhat with increased assignment, however, since some unassigned claims are not submitted by enrollees now, even though reimbursement would be made if they were submitted.

Two options that might further increase assignment rates are discussed here: one would increase incentives for assignment by providing participating physicians with one-stop billing, relieving them of the need to bill patients at all; the second option would make assignment mandatory on all Medicare claims. A third option that would require nonparticipating physicians to make an "all-or-nothing" choice on assignment--that is, either accept all Medicare claims on assignment for a designated period, or accept none of them--is not discussed, because studies show that the aggregate assignment rate on Medicare claims would fall under this approach. According to these studies, most physicians who currently accept assignment on a claim-by-claim basis would lose more through elimination of balance-billing on claims they currently refuse to assign than they would from loss of patients they currently treat on an assigned basis. 24/

Provide One-Stop Billing for Participating Physicians. One important factor that affects physicians' assignment decisions is the ease of collecting payment on assigned claims. Relevant considerations include the time the carrier takes to pay claims, whether the carrier is also a major medigap insurer, and whether medigap policies cover deductible amounts as well as coinsurance amounts. 25/ Billing is simplified when the carrier is also the medigap insurer and medigap covers deductible amounts, since physicians who accept assignment need submit claims to only one carrier for payment. When the carrier is not the medigap insurer, physicians must also bill patients or a second carrier to collect deductible and coinsurance amounts even on assigned claims. Hence, physicians who are confident their patients will pay may choose to eliminate the need for double-billing by refusing assignment.

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24. See Janet B. Mitchell and Jerry Cromwell, "Impact of an All-or-Nothing Assignment Requirement Under Medicare," *Health Care Financing Review*, vol. 4, no. 4 (Summer 1983), pp. 59-78; and David Juba and others, "Physician Behavior Under an All or None Assignment Policy," Working Paper 1306-02-10 (Urban Institute, Washington, D.C., December 1984).

25. McMillan, Lubitz, and Newton, "Trends in Physician Assignment Rates for Medicare Services, 1968-1985."

Medicare carriers could be instructed to pay all of the allowed fee to participating physicians, thereby relieving such physicians of the need to bill their patients for deductible and coinsurance amounts. Having carriers bill patients or medigap carriers for copayment amounts would increase physicians' incentives to participate (especially if coupled with faster claims processing), but would transfer the costs of bad debt from physicians to the Medicare program and would increase administrative costs for carriers. Estimated copayment amounts for physicians' services under Medicare in 1985 totaled $6.1 billion. While this amount means that the maximum potential costs to Medicare for bad debt would be substantial, most copayments would actually be paid by medigap policies or Medicaid. If there were difficulty in collecting remaining amounts owed by enrollees, some provision might be made to collect past-due amounts by deducting them from Social Security checks, just as SMI premium payments are currently collected. This might substantially increase Social Security's administrative costs, though, because it would be far more difficult to use the system to collect past-due payments on an irregular basis than it is to collect fixed monthly premium amounts.

Make Assignment Mandatory Under Medicare. If assignment were mandatory, Medicare enrollees who see physicians who do not accept assignment would be responsible for all of those physicians' charges. Medicare would pay no part of charges on unassigned claims. The major advantage of this approach is that it would almost certainly increase the share of physicians accepting assignment for all their Medicare patients (nearly 30 percent of physicians who treat Medicare patients currently participate). One survey of physicians indicated that about 75 percent of self-employed physicians would accept Medicare patients if assignment was mandatory. 26/

A mandatory assignment requirement has a number of disadvantages, however. It would eliminate the option physicians now have of collecting their usual charge from patients who are able to pay, while accepting less from other patients. The patients of those physicians who refused assignment either would be liable for all of their physicians' charges or would have to find new physicians. Access to physicians could be reduced, particularly to prestigious physicians who are so much in demand that they can afford to lose their Medicare patients, and to specialists who are not heavily dependent on the Medicare population, such as gynecologists and pediatricians. Further, some physicians who agreed to the mandatory requirement could encounter a sharp reduction in receipts from Medicare patients, creating incentives to provide them with second-class care. The

26. CBO tabulations from the Health Care Financing Administration's 1984 Physicians' Practice Costs and Income Survey.

significance of these effects, though, would depend critically on how generous Medicare's payment rates were relative to those of other payers. Pressures from both Medicare enrollees and physicians to increase Medicare's rates might therefore be stronger than they are now, because balance-billing would no longer provide an escape from Medicare's constraints.

QUALITY AND VOLUME CONTROLS

There would be no concerns about quality of care under a fee schedule that do not already exist under the CPR system. In a fee-for-service system, quality is a problem primarily to the extent that providing unnecessary services is both risky and costly for patients. Hence, controls for excessive volume of services are also quality controls. Underprovision of appropriate care would not have to be monitored unless service packages were developed.

The volume of services in a fee-for-service system could be controlled in ways that are not now being used by Medicare: volume-related adjustments to the monetary multipliers used to update payment rates could control spending in the aggregate, and systematic monitoring of physicians' practice profiles could help to prevent individual physicians from gaining at the expense of the group. These methods have been used with success in other countries, as discussed in Appendix A.

Total approved charges per enrollee might be constrained to increase each year by no more than physicians' cost increases, as measured by the Medicare Economic Index, for example. If volume per enrollee were constant, increasing the monetary multiplier in each region by growth in the MEI would accomplish this result. If volume increased, however, total approved charges per enrollee would increase by more than costs. In this case, the multiplier adjustment in the following year could be reduced from the increase justified by the MEI for that year, to offset the volume increases of the preceding year. Or adjustments to payment rates might be made in the same year, based on projections of spending.

The same mechanism could be used even if some increase in volume per enrollee was thought to be desirable, to account for aging of the Medicare population and medical advances, for example. Approved charges per enrollee could be permitted to increase by growth in costs plus an appropriate allowance for these factors, before triggering downward adjustment of payment rates. Determining the appropriate allowance for factors such as aging and technology could be difficult, however. This is especially so for

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medical advances, since they could either increase or reduce the variety and costs of services that could be of benefit to enrollees. One, essentially arbitrary, option would be to allow approved charges per enrollee to grow each year by growth in GNP, so that some increase in volume of services per enrollee would be permitted so long as Medicare's payment rates increased less rapidly than GNP. Alternatively, the growth in total approved charges for physicians' services could be limited to growth in GNP. Unless medical price increases were lower than the economywide average price increase, however, this limit would result in a decline in the volume of services per enrollee if the Medicare population grew more rapidly than real GNP.

If adjustments to payment rates were used to offset aggregate volume increases, most physicians would want carriers to monitor their peers for excessive billing, using claims data to construct physician profiles, because otherwise some physicians could gain at the expense of the group by increasing their billings by more than average. Sanctions against physicians whose practice patterns or billings were found to be unwarranted could include recoupment of payments, expulsion from the Medicare program, or prosecution for fraud, depending on the circumstances. The profiles would be used only to identify claims that merited further investigation, so that physicians would have an opportunity to justify their service patterns before carriers would decide whether sanctions were justified. Physicians who treated unusually severe cases thus would not be penalized. Analysts in countries that use this method of volume control believe that physicians' awareness that practice profiles are examined is generally sufficient in itself to limit overprovision of services.

The use of physician profiles has an additional advantage in that it could help to reduce the wide variation in treatment patterns that exists currently, apparently stemming from lack of information or consensus about what constitutes appropriate care in some cases. Under some conditions, physicians are quick to adjust their practice patterns when made aware that their practices diverge from the norm. 27/

Savings from implementing a fee schedule to replace the CPR system could be substantial if coupled with controls on use of services, including a cap on spending. If a fee schedule for physicians' services were implemented on January 1, 1988, based on average amounts allowed for each service during the previous year, with annual increases in payment rates set each year thereafter by the MEI, cumulative estimated savings from current law would total $1.2 billion through 1991 (see Table 20). With the addition of a spending cap on charges per enrollee set by growth in the MEI,

27. See *Health Affairs*, vol. 3, no. 2 (Summer 1984). The entire issue is devoted to analysis of practice variations across localities.

TABLE 20. FEDERAL SAVINGS FROM IMPLEMENTATION OF A MEDICARE FEE SCHEDULE FOR PHYSICIANS' SERVICES, FISCAL YEARS 1987-1991 (In millions of dollars)

Type of Fee Schedule	1987	1988	1989	1990	1991	Cumulative Five-Year Savings
Rates Increased Each Calendar Year by the MEI and:						
No Cap on Spending	--	90	220	360	490	1,160
Cap on Growth in Charges Per Enrollee Set by Growth in MEI	--	320	970	1,780	2,670	5,740
Cap on Growth in Charges Per Enrollee Set by Growth in GNP	--	90	240	440	670	1,440
Cap on Growth in Total Charges Set by Growth in GNP	--	300	810	1,470	2,230	4,810

SOURCE: Congressional Budget Office.

NOTES: MEI = Medicare Economic Index; GNP = gross national product. These estimates assume that participating and nonparticipating physicians would be treated alike under the fee schedule.

cumulative savings through 1991 would be $5.7 billion, but this option would permit no increase in the volume of services per enrollee. If increases in charges per enrollee were limited to the rate of growth in GNP, cumulative savings would be $1.4 billion through 1991. This option would permit volume increases nearly equal to those projected to occur in the absence of a spending cap. Finally, if growth in total charges were limited by growth in GNP, cumulative savings would be $4.8 billion through 1991. This option would permit some increase in services per enrollee over the projection period, and would ensure that Medicare's spending for physicians' services would not grow as a percentage of GNP. This option could result in reduced services per enrollee in later years, though, when the aged population begins to swell because of the baby boom cohort.

CHAPTER V

CASE-BASED PAYMENT SYSTEMS

More fundamental changes in Medicare's payment methods for physicians might be made in the long run by basing payment on comprehensive service packages, thereby altering the incentives for expanding the volume of services that are inherent in fee-for-service payment methods. One option would be case-based packages that would include all services related to a given case, condition, or episode of care.

Under a case-based payment system, a fixed payment would be made for all condition-related medical services during a defined episode of care, regardless of the actual services provided. Physicians would have incentives to curtail unnecessary services within the case package because their costs would come out of the fixed case payment; ancillary services, including the services of other physicians, would no longer be free for the primary physicians. One disadvantage of such a system is that physicians might in some cases forgo medically necessary care as well, although medical ethics and concern about malpractice suits would work against this. In addition, physicians would have incentives to shift services outside the package to increase reimbursement.

Further research on alternative ways to define episodes of care, on criteria for classifying patients, and on implementation methods would seem advisable, because there is virtually no experience with comprehensive case-based payment methods for physicians' services. 1/ It is uncertain how to define cases appropriately for physicians' care, how to distribute payments

1. Current packaging of pre- and postoperative visits with the charge for surgery is only a very limited form of a case-based package, since charges for laboratory tests, x-rays, and the services of other physicians are billed separately. In the early 1970s, an experimental case-based payment method for inpatient services was implemented by Pennsylvania Blue Shield, but here, too, the payment package covered only the primary physician's services. See report by Gene A. Markel, "Hospital Utilization Effects of Case Reimbursement for Medical Care," pp. 95-99 in Jon R. Gabel and others, eds., *Physicians and Financial Incentives* (Department of Health and Human Services, HCFA Publication No. 03067, December 1980).

for a given episode among the various physicians on the case, how physicians would respond to the incentives created, and how enrollees might be affected.

In principle, case-based payment categories could be defined for some or all inpatient services and for some or all ambulatory services. But in practical terms, a case-based payment system would probably have to be limited to inpatient services because of the difficulty of defining an episode of care for most ambulatory conditions. Unless ambulatory cases were defined to cover all services provided during a specified period of time (similar to a capitation payment), there would likely be too much ambiguity about which services were to be included in the case payment and which were outside the condition and therefore eligible for additional reimbursement. 2/

Two case-based payment methods are discussed in this chapter: one that would cover all inpatient physicians' services for all episodes of care; and one that would cover all inpatient episodes but only for services of certain hospital-based physicians.

PACKAGING ALL PHYSICIANS' SERVICES FOR ALL INPATIENT EPISODES

One option under discussion is to pay for all physicians' inpatient services on a case basis, similar to Medicare's payment for hospital services under the prospective payment system, in which diagnosis-related groups (DRGs) are used to classify patients for payment purposes. 3/ Physicians' services could be packaged together with hospital services, and a single payment made for each case--either to the hospital or to a joint venture established by the hospital and its medical staff. Alternatively, a separate payment for physicians' services could be made either to individual primary physicians or to the hospital medical staff as a group.

Paying physicians by DRG or some other grouping system could give physicians strong financial incentives to forgo services with little or no

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2. See Chapter 8 in Janet B. Mitchell and others, "Alternative Methods for Describing Physician Services Performed and Billed," Report No. 84-4 (Health Economics Research, Inc., Chestnut Hill, Massachusetts, May 1984).

3. See Janet B. Mitchell and others, "Creating DRG-Based Physician Reimbursement Schemes: A Conceptual and Empirical Analysis, Year 1 Report" (Center for Health Economics Research, Chestnut Hill, Massachusetts, October 1984), for a detailed discussion of this approach.

medical benefit, in contrast to the incentives inherent in fee-for-service systems to provide many services. Considered in isolation, this would surely result in fewer services per hospital admission. The PPS system already works in this direction, though. DRG-based payments for hospital services are inducing shorter lengths of stay for Medicare admissions so that physicians have fewer visits for which to bill, regardless of how they are reimbursed. Further, hospitals are attempting to persuade physicians to reduce their use of hospital services per admission.

Some additional effects would result from paying for physicians' services on a case basis. A case-based payment system for physicians would reduce current incentives for physicians to intensify their services to compensate for the smaller number of inpatient visits for which they can bill. It could also reduce use of consulting or supporting physicians' services for inpatient care. (Allowed amounts for inpatient consultations account for nearly 3 percent of all physicians' costs in Medicare, while inpatient costs for assistant surgeons, radiologists, anesthesiologists, and pathologists account for about 11 percent of all physicians' costs.) 4/ Incentives for physicians to suggest more postdischarge follow-up visits might also be reduced, if the case payment included a period of time before and after the inpatient episode.

Access to care and its quality, however, might be reduced under a case-based payment system for physicians. Patients with severe conditions might find that physicians were reluctant to treat them since they would be "unprofitable," unless the classification system accounted well for differences in severity among patients. The DRG system does not, and refinements or alternatives that might account better for differences in severity are not yet sufficiently developed to use even for hospital services. 5/ No work has been done to assess whether or how any of them would have to be modified for physicians' services. Quality of care might also be reduced, if primary physicians failed to use consultants in instances when skills supplemental to their own were required. Because consultations may be overused currently, however, some reduction might occur without adversely affecting health status.

A major concern about including physicians' services in the prospective payment system for inpatient care is that it might align the financial incentives facing physicians too closely with those of hospitals, so that physicians

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4. CBO tabulations from HCFA's 1984 Medicare Annual Data Procedure file.

5. See *Health Care Financing Review*, 1984 Annual Supplement. This issue is devoted to discussion of classification methods that would better account for differences in severity for inpatient episodes of care.

would be less effective as agents on behalf of their patients. Under the PPS, hospitals have financial incentives to limit services, but physicians do not currently face the same incentives. If payments to primary physicians were also case-based, those physicians might be less inclined to serve as advocates for their hospitalized patients.

Unit of Payment

The ideal classification method for grouping patients for payment purposes would be such that patients in any one category would require services that were reasonably uniform in terms of cost. A major consideration in evaluating a classification system for case-based payments is whether variation in actual treatment costs for patients in a given category arises because of appropriate differences in care, or because of unnecessary and costly differences in physicians' practice patterns. If the former, the classification system would have to be modified to avoid inappropriate changes in physicians' behavior. If the latter, the payment system could have the desirable result of eliminating high-cost practices of doubtful benefit, with eventual savings to Medicare if the initial DRG weights were changed to reflect the less resource-intensive practice patterns that would develop.

The DRG system currently used for hospital reimbursement under Medicare is based primarily on diagnosis at the time of discharge and on the principal surgical procedure performed, if any. Although payment is higher for cases in which the patient is older or has some other complicating condition, there are complaints that the DRGs do not account well for severity of illness within a particular group. Further, the groups defined by the system are not clinically homogeneous with regard to appropriate physicians' services. This is because of the difficulty in defining in advance what services will be required for most medical cases, and because some of the surgical DRGs fail to distinguish between types of surgery that require significantly different services by physicians. For example, DRG 39 includes both simple extractions of cataracts and extractions combined with implantation of an intraocular lens; DRG 209 includes all major joint procedures, no matter which joints or how many are involved. 6/

The reasoning behind the case-based approach for hospitals was that payment amounts set at average costs for any given category would reflect the appropriate (or at least the current) level of services, on average,

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6. Pending HCFA regulations would create a separate DRG (471) for multiple joint procedures.

although payment for any specific case might be more or less than adequate for the services actually provided. Hospitals treat enough cases in each category so that, on average, the gains and losses on particular cases were expected to cancel out. There are problems even here, though, in that individual hospitals may experience gains or losses if their cases within DRGs are systematically less or more expensive to treat than the average. 7/ Concerns about this possibility have led to efforts to refine the DRG system by incorporating adjustments for severity within each DRG, in addition to the special provisions for teaching hospitals that were incorporated originally.

One analysis of Medicare data in four states indicated that primary physicians treat fewer than three cases in any given DRG category, on average, and fewer than 45 cases in all categories in the course of a year, so that gains and losses for individual physicians would not be likely to cancel out. 8/ As a result, physicians' financial risks from a series of unusually resource-intensive cases under a DRG-based payment system would likely be unacceptably high unless the patient-classification system was far more sensitive to severity differences than the DRG system is, or case payments were pooled across groups of physicians, such as all physicians on the hospital's medical staff, to spread the risk. It is uncertain how pooled payments to the medical staff would be allocated among physicians, though, or how much that would weaken the incentives inherent in a case-based system.

Payment Rates

As with a fee schedule, case-based payment rates could be viewed as the product of two parts--a relative value scale (RVS) and monetary multipliers. The schedule of payment rates by DRG would be an RVS, which could be recalibrated periodically in response to changes in practice patterns or technology. The monetary multipliers applied to the weights in the RVS could vary by location. In addition, the entire scale could be updated annually to keep pace with cost increases.

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7. In addition, some hospitals reportedly are treating the average expected days of care for each DRG as the maximum, telling Medicare patients, inaccurately, that their benefits are exhausted.

8. Janet Mitchell and others, "Physician DRGs: What Do They Look Like and How Would They Work?" (Center for Health Economics Research, Chestnut Hill, Massachusetts, February 1985). The states examined in this study were Michigan, New Jersey, North Carolina, and Washington.

Payment rates ideally would reflect the appropriate mix of services for each case at prices that reflected costs and any other relevant factors, but determining these rates could be very difficult. If payment rates for physicians' services were set at Medicare's average allowed amounts for each case, as they were for hospital rates, they would incorporate not only the current structure of rates for individual services but also current practice patterns. Payment based on average costs would, for example, allow partial payment for assistant surgeons in instances where the use of an assistant was not universal, while it would probably be better to decide whether or not the use of an assistant was good medical practice and to set the case payment rate accordingly.

Actual treatment costs vary substantially both above and below the average cost for DRG categories. As a result of this variation and its asymmetry (in that a small proportion of cases are extremely costly), payments based on average costs per DRG would result in larger payments than are currently received for most cases but in large losses for the most costly cases. Although variation is much less for surgical cases than for medical cases, physicians' financial risks could be large even for surgical cases because charges for surgical cases are generally greater than for medical cases. 9/

Assignment

Assignment would probably have to be made mandatory under a case-based payment system for physicians, especially if the system did not account well for differences in severity. Otherwise, physicians might accept assignment on cases that promised to be low-cost relative to the case payment, but refuse assignment on cases that were likely to be high-cost, thereby leaving the patient fully liable for charges above the case payment. As a result, patients with severe conditions would be effectively denied the protection that insurance is intended to provide. Mandatory assignment, however, could increase physicians' reluctance to accept patients with severe conditions.

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9. The DRG system was developed for hospital services, not physicians' services. Surprisingly, though, it appears to create groups that are more homogeneous in use of physicians' services than of hospital services, although "homogeneous" is a relative term. None of the medical DRGs are homogeneous for hospital or physicians' services. See Mitchell and others, "Physician DRGs."

Quality and Volume Controls

Both quality assurance and utilization review would be required under a case-based system, although Peer Review Organizations already are doing much of this under the PPS. The principal advantage of a case-based pay ment system would be its effect on reducing unnecessary services within the package, but in some instances medically necessary services might be reduced as well. Consequently, monitoring the quality of care would be desirable during the inpatient episode. Readmissions would also have to be monitored to guard against attempts by physicians to do in two or several admissions what could be done in a single admission. In addition, carriers would have to monitor physicians' claims for ambulatory services on either side of the inpatient episode to ensure that services intended to be included in the case payment were not billed separately, and this would increase carriers' administrative costs.

INCLUDING HOSPITAL-BASED PHYSICIANS' SERVICES IN THE HOSPITAL PPS PAYMENT

A more limited alternative would expand the hospitals' DRG payments to reflect the costs of services provided by certain hospital-based physicians--radiologists, anesthesiologists, and pathologists (RAPs). 10/ RAPs are supporting physicians who commonly are either employed by or under contract to hospitals (see Table 21). Consequently, paying for their services through the hospital would be a less radical change than it would be for primary physicians. Further, RAPs are a group for which other payment mechanisms intended to encourage greater price-shopping by patients would not be effective, since patients rarely, if ever, have the opportunity to select the supporting physicians their physicians use.

The physicians affected, however, would likely object to this arrangement because it would reduce their autonomy and might significantly reduce growth in their income. Radiologists and anesthesiologists have the highest, and the most rapidly increasing, net incomes among physicians surveyed by the American Medical Association. Estimated rates of return to training for these specialties are also higher than for most other specialties (Table 22).

This approach would also reverse changes required by the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), effective October 1, 1983. TEFRA reiterated the intention of the Congress that patient-related

10. Other hospital-based physicians, such as staff consultants, might also be included.

TABLE 21. PHYSICIANS' FINANCIAL ARRANGEMENTS WITH HOSPITALS, 1981

Specialty	Percent with Financial Arrangements	Percent of Income from Hospital Arrangement a/
All Physicians	26	62
Radiologists	58	80
Anesthesiologists	27	87
Pathologists	78	96

SOURCE: American Medical Association, *Socioeconomic Characteristics of Medical Practice, 1983* (AMA, Chicago, Illinois), pp. 11-14.

a. This is the percent of net income that physicians who had financial arrangements attribute to their financial contracts with hospitals.

TABLE 22. PHYSICIANS' NET INCOME AND RETURN TO TRAINING, SELECTED SPECIALTIES

Specialty	Average Net Income (In current dollars) 1983	Annual Growth Rates (In percents) 1975-83	Annual Growth Rates (In percents) 1981-83	Rate of Return to Training (In percents) 1983
All Physicians	106,300	8.2	6.9	16.0
Radiologists	148,000	8.8	12.5	20.0
Anesthesiologists	144,700	12.3	10.5	22.0
Pathologists	117,700	N.A.	N.A.	17.0

SOURCE: For income, American Medical Association, *Socioeconomic Characteristics of Medical Practice, 1984* (AMA, Chicago, Illinois); for rates of return, Frank Sloan and Joel Hay, "Medicare Pricing Mechanisms for Physicians' Services: An Overview of Alternative Approaches," *Medical Care Review*, vol. 43, no. 1 (Spring 1986).

NOTE: N.A. = not available.

services of all physicians be billed under the SMI program (Part B of Medicare), and HCFA's subsequent regulations eliminated the "combined billing" option by which hospitals had billed HI (or Part A) intermediaries for some hospital-based physicians' services as well as for hospital services. These regulations were intended to eliminate the possibility of double-billing--both through HI intermediaries and SMI carriers--for the services of hospital-based physicians. Double-billing would also be effectively prevented, however, if all billing for inpatient services for RAPs had to go through HI intermediaries. Further, this option would eliminate the need for hospitals to make sometimes arbitrary determinations of whether given RAP activities were patient-related (and hence billed through SMI) or not (and billed through HI).

Unit of Payment

In this case, the unit of payment would be based on the DRG classification system, with payment rates augmented to reflect the costs of patient-related services provided by RAPs. RAPs render some general administrative services to hospitals (not patient-related) that are already included in hospitals' costs under the PPS. The entire case payment would go to the hospital, which could establish any financial arrangements with the RAPs on staff that it chose.

By incorporating the costs of patient-related services of RAPs in hospitals' case payments for each Medicare patient, hospitals would have incentives (now lacking) to negotiate low-cost rates for these physicians and to use their patient-related services more efficiently. Potential savings would be relatively small, however, because allowed amounts for RAPs' patient-related inpatient services account for only about 10 percent of all physicians' allowed amounts under Medicare.

Payment Rates

The payment rate for each hospital DRG could be increased by an estimate of the reasonable costs of services rendered by RAPs to patients in each group. Some adjustment to this amount could be made if it was thought that the services of RAPS were currently overused or underused in some instances, although this could be difficult to determine.

Medicare's reimbursement costs could increase as a result of this change, unless some adjustment was made to copayments by enrollees to offset elimination of the 20 percent coinsurance that Medicare patients now

pay on approved charges submitted by RAPs. The HI first-day deductible, the SMI deductible, or SMI premiums could be increased to compensate for reduced coinsurance payments. Alternatively, Medicare could increase DRG rates by only 80 percent of current allowed amounts for RAPs, with the result that hospitals would either have to negotiate lower payments to RAPs on staff or accept a reduction in profits.

Assignment and Access

Assignment would become mandatory since the services of RAPs would be folded in with hospitals' services, and all hospital inpatient services are assigned under Medicare. Access to care would not be significantly affected by this expansion of the services included in the hospital's case payment so long as the addition to current payment rates was sufficient to compensate hospitals for the reasonable costs of services provided by RAPs. In fact, patients' access to care might be improved by this change if higher SMI premiums (rather than an increase in deductible amounts) were used to offset the loss of patient cost-sharing on the services of RAPs, because this would reduce out-of-pocket costs for enrollees with hospital stays and spread those costs among all SMI enrollees instead.

Quality and Volume Controls

No controls additional to those already in place under the prospective payment system would be required for inpatient services, since PROs currently monitor admissions and quality of care during inpatient episodes. This option could increase the need for quality and volume controls on services provided in ambulatory settings, however, since some RAPs might respond to this option by seeking to shift their services out of the hospital.

CHAPTER VI

CAPITATED PAYMENT SYSTEMS

Under a capitation approach, Medicare would pay a fixed amount per enrollee to selected organizations that would agree in return to provide all covered medical services to enrollees. Since Medicare's payment would be fixed in advance, it would be independent of the services actually used.

Organizations receiving capitated payments would be at risk; that is, they would profit if enrollees could be served for less, but would lose if expenses per person exceeded Medicare's payment. These organizations would have no financial incentive to provide unnecessary services, because they would receive no extra revenue from additional services. Instead, their incentives would be to provide the least costly mix of services that would deal with enrollees' medical needs and to produce those services as efficiently as possible.

This chapter discusses three types of capitated systems. In the first, the organizations at risk would be prepaid medical plans (PMPs) that combined the roles of insurer and health care provider. In the second system, Medicare enrollees would be permitted to use a voucher (based on the adjusted average per capita cost of Medicare benefits) to purchase traditional indemnity insurance instead of Medicare. In the third system, the agencies at risk would serve as Medicare carriers who would not only administer payments but would also arrange for physicians and other health care providers to care for all Medicare enrollees in their jurisdictions. 1/

PREPAID MEDICAL PLANS

All Medicare enrollees currently have the option of enrolling in risk-based prepaid medical plans, and, as of March 1986, about 590,000 (or 2 percent)

1. Individual physicians would not likely accept the risks of capitated payments (unless Medicare paid them a substantial risk premium), since each physician's total patient load each year would be too small to ensure that high-cost patients would be offset by other low-cost patients.

of enrollees had elected this option. 2/ The primary issues with regard to Medicare enrollment in PMPs are whether it would be desirable to provide greater incentives for enrollment than already exist and, if so, how to create those incentives. As discussed below, health care costs may be lower under (at least some forms of) capitated payment systems than in the fee-for-service sector, with few apparent adverse effects on quality of care. Hence, greater enrollment in PMPs may have potential for reducing Medicare costs, although savings for the Medicare population may be smaller than for the non-Medicare populations studied. Incentives for enrollment--both for Medicare enrollees and for PMPs--are determined by provisions regarding Medicare's capitated payment rates to providers.

Unit of Payment

Under a capitation system, the unit of payment is the individual, and the capitated payment is intended to include all covered services required by the individual during a given period of time. Medicare's payments to PMPs cover Medicare's share of costs for HI and SMI services, based on Medicare's actual costs in the fee-for-service sector for enrollees of the same type. Since the services covered by PMPs are typically more extensive than those covered by Medicare, enrollees often pay a supplemental premium to the PMP in addition to the SMI premiums they pay.

Prepaid medical plans may take a number of forms, but the two major types are the group or staff model health maintenance organization (HMO) and the independent practice association (IPA). In HMOs, physicians are employees (as in a staff model) or contractors (as in a group model) of the organization that is at risk, and they provide services only to HMO enrollees at one or a limited number of sites. In IPAs, member physicians maintain their individual practices and provide services on a fee-for-service basis, both to IPA enrollees and to other patients. Their association with the IPA typically involves an ownership interest in the organization and in any profits or losses resulting from serving prepaid patients, coupled with acceptance of conditions imposed by the IPA to restrain use of services, such as preadmission certification for nonemergency hospitalization, utilization review, and prorated reductions in reimbursement rates if use of services is high.

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2. Another 150,000 enrollees were receiving services from PMPs on a cost-reimbursement basis, while about 640,000 enrollees were receiving services from health care prepayment plans (which provide only Part B services, on a cost-reimbursement basis).

Payment Rates

Under the provisions for risk-based PMPs contained in the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), Medicare makes monthly payments for each Medicare enrollee equal to 95 percent of Medicare's adjusted average per capita costs (AAPCC)--an actuarial measure of the costs that Medicare would have incurred if the plan's enrollees had received services from fee-for-service providers in the same community. Payment rates vary by county and also by enrollees' characteristics. The characteristics used to vary rates currently include enrollees' age, sex, welfare status, and whether they are in institutions.

If Medicare enrollees who elect to receive care from PMPs are, on average, like other Medicare enrollees, setting Medicare's payment rates at 95 percent of the AAPCC will save Medicare 5 percent per Medicare/PMP enrollee. The PMP option could save Medicare more than 5 percent if PMP enrollees are more likely to use services than the average Medicare enrollee, while Medicare costs might increase if PMP enrollees are less likely to use services than average. A major concern is that PMPs will enroll primarily healthier people. If this occurs, Medicare payments to PMPs will be higher than necessary to cover the costs for these enrollees, thereby increasing Medicare's costs. This biased selection could occur either because PMPs market their services selectively, or because less healthy enrollees are more likely to want to stay with their fee-for-service physicians. IPAs are less likely than HMOs to benefit from the latter cause of biased selection, though, because in many instances enrollees are able to continue with their current physicians.

In an effort to limit profits for PMPs arising from biased selection, the Congress required that certain savings would have to be used to benefit enrollees. PMPs with Medicare enrollees are required to compute their "adjusted community rate" (ACR)--that is, each PMP's estimated per capita cost for providing the services covered by Medicare to Medicare enrollees. If a plan's ACR is less than Medicare's average payment for enrollees, the plan is required to provide Medicare enrollees with additional benefits, or to reduce their PMP premiums or copayments. Methods for calculating the ACR are not well defined, though, and some PMPs may be making--and retaining--sizable profits from Medicare enrollees.

Because of these requirements related to each plan's ACR, PMPs' profits on Medicare enrollees are limited, at least in principle, but their potential losses are not. The risk of loss from Medicare enrollees could be substantial, especially for relatively small PMPs, because the cost of care

varies substantially among Medicare enrollees. Each year, nearly 50 percent of Medicare reimbursements are made on behalf of only 5 percent of enrollees. In 1984, no reimbursements were made for 30 percent of enrollees. 3/ The financial risks to PMPs are even higher than these figures indicate, since PMPs generally provide better coverage for catastrophic expenses than Medicare does.

Prepaid medical plans can reduce their financial risks from Medicare enrollees by attempting to enroll individuals who present a lower risk. Small plans, in particular, have a strong incentive to cushion against such risk. Medicare attempts to limit the success of such efforts, however, by requiring Medicare-eligible PMPs to hold open enrollment periods of at least 30 consecutive days each year. During the open enrollment period, plans are required to accept enrollees up to their capacity limits on a first-come basis, regardless of risk factors. Most analysts believe, however, that biased selection may occur even with open enrollment requirements. 4/

The incentives for PMPs to engage in marketing techniques that would lead to biased selection of enrollees could be reduced in two ways. First, Medicare could refine the methods used to calculate the AAPCCs so that payments would more closely reflect average costs for various groups of enrollees, thereby reducing the PMPs' financial incentives to prefer some types of enrollees over others. Second, Medicare could limit PMPs' financial risk by capping the maximum losses they would have to absorb for high-cost enrollees--that is, implementing stop-loss provisions. Both approaches would reduce but would not eliminate the financial incentives for PMPs to provide care efficiently.

Research is under way to refine the AAPCCs by incorporating measures of prior use of medical care and indicators for whether prior medical problems were acute or chronic. Modifications of the AAPCCs that recognize only prior use of medical care raise the explanatory power (or predictive accuracy) of the AAPCCs from less than 1 percent of actual costs per enrollee to 4 percent. When information on diagnoses indicative of chronic conditions likely to result in continued high medical costs also is

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3. See Daniel Waldo and Helen Lazenby, "Demographic Characteristics and Health Care Use and Expenditures by the Aged in the United States, 1977-1984," *Health Care Financing Review*, vol. 6, no. 1 (Fall 1984), pp. 1-29; and Social Security Administration, *Social Security Bulletin, Annual Statistical Supplement, 1984-1985*.

4. J. Beebe and others, "Using Prior Utilization to Determine Payments for Medicare Enrollees in Health Maintenance Organizations," *Health Care Financing Review*, vol. 6, no. 3 (Spring 1985), pp. 27-38.

incorporated, the explanatory power of the modified AAPCCs is increased to 9 percent of the variance in actual costs per enrollee. 5/ The accuracy with which a refined AAPCC would reflect costs for groups of enrollees is more important than its ability to predict costs for individual enrollees, though, because Medicare pays PMPs for groups of enrollees. By adjusting the AAPCC for prior hospitalization and for receipt of SMI reimbursements, prediction errors for groups of enrollees could be reduced by one-half to one-third of the average error using the current AAPCC. 6/

Despite greater predictive ability, use of prior utilization to improve the sensitivity of the AAPCCs may be undesirable, if it is subject to manipulation by PMPs. If payment rates were increased on the basis of prior hospitalization, for example, inefficient PMPs that hospitalize more often than necessary would be rewarded. Use of any refinement to the AAPCC that could be manipulated by PMPs would lead back to the perverse incentives that improvement of the AAPCCs is intended to eliminate. 7/ Research is now under way to find accurate predictors of costs per enrollee that are outside the control of health care providers.

Under stop-loss provisions for PMPs, Medicare would share the costs of high-cost enrollees, thereby reducing financial risks for PMPs. In exchange for sharing the risk, Medicare might pay PMPs that elect this option a lower proportion of the AAPCC than is paid to PMPs that bear all the risk. In effect, Medicare would be providing reinsurance to PMPs. 8/ The stop-loss provisions could be based on individual costs; Medicare might pay 80 percent of the costs of an individual's care over a specified amount, for example. Alternatively, stop-loss protection could be based on a plan's aggregate costs for Medicare enrollees, so that Medicare would absorb a PMP's losses on Medicare enrollees that exceeded 5 percent, say, of Medicare's capitation payments to the plan.

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5. Office of Technology Assessment, *Payment for Physician Services: Strategies for Medicare*, OTA-H-294 (February 1986), p. 190.

6. See Beebe and others, "Using Prior Utilization to Determine Payments for Medicare Enrollees in Health Maintenance Organizations."

7. See Walter McClure, "On the Research Status of Risk-Adjusted Capitation Rates," *Inquiry*, vol. 21 (Fall 1984), pp. 205-213, for a discussion of the risks of adjustment factors that are subject to the control of providers.

8. Some PMPs currently purchase reinsurance through private insurance companies, but the federal government might provide it at lower cost because of lower marketing and administrative expenses.

If the AAPCCs were refined, payment rates might be set lower than 95 percent of costs in the fee-for-service sector and still result in profits for PMPs. Considerable evidence exists--at least for the HMO variant and for nonelderly populations--that the incentives generated by capitated payments for health care effectively reduce the costs of care, primarily by reducing the incidence of hospital admissions. 9/ For hospitalized patients, studies have found only small differences between HMO enrollees and fee-for-service patients in the volume and cost of services provided, but these studies did not control for severity of illness. 10/ Since HMO enrollees are less likely to be hospitalized, those who are hospitalized may have more severe conditions, on average, than the typical fee-for-service patient who is hospitalized. Enrollees in HMOs typically use more ambulatory services, primarily office visits, than patients in the fee-for-service sector, but this is apparently because of the lower out-of-pocket costs generally faced by enrollees in HMOs for visits. Visit rates are similar for HMO and fee-for-service patients when neither group faces out-of-pocket costs. The net result is that health care costs are about 25 percent lower for enrollees in HMOs than for similar individuals receiving care in the fee-for-service sector under similar conditions with regard to cost-sharing. 11/

The ability of IPAs to reduce costs is less well documented, but there are indications that IPAs that implement stringent controls, which are increasingly acceptable to physicians because of growing competition for patients, also can reduce costs significantly. A comparison of inpatient days per enrollee provides one crude measure of the success of IPAs at controlling costs, relative to traditional HMOs and the fee-for-service sector. Data for 1984 show that average inpatient days per enrollee in IPAs was .448, compared with an average of .418 for staff-type HMOs and .700 for people receiving care on a fee-for-service basis. 12/ One concern with the IPA model, however, is that physicians who treat both IPA and fee-for-service patients may tend to favor fee-for-service patients when they are fully booked, since treating those patients would likely involve fewer constraints on fees and volume of services.

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9. See H.S. Luft, *Health Maintenance Organizations: Dimensions of Performance* (New York: Wiley, 1981).

10. Richard J. Arnould and others, "Do HMOs Produce Specific Services More Efficiently?" *Inquiry*, vol. 21 (Fall 1984), pp. 243-253.

11. W.G. Manning and others, "A Controlled Trial of the Effect of a Prepaid Group Practice on Use of Services," *New England Journal of Medicine*, vol. 310, no. 23 (June 7, 1984), pp. 1505-1510.

12. Interstudy, *National HMO Census, 1984* (Excelsior, Minnesota: Interstudy, 1985).

Savings under capitation for Medicare enrollees might be smaller than the results reported above for the nonelderly population, however, because the major savings found for capitation come from less hospital use per enrollee compared with patients in the fee-for-service sector. For Medicare enrollees, the prospective payment system and preadmission reviews by Peer Review Organizations are already constraining use of the hospital, leaving less room for capitated payment systems to generate further savings.

Assignment

Assignment is not an issue for prepaid medical plans. Enrollees in PMPs have entered into a contractual arrangement with the plan, under which the plan agrees to provide a set of specified services, as required and under well-defined conditions (concerning copayments, for example), in return for certain premium payments.

Quality and Volume Controls

Medicare's concern when care is provided by PMPs is limited to quality of care and not to volume, since the payment system itself contains strong financial incentives for PMPs--but not necessarily for physicians on staff--to limit unnecessary care. The PMPs must implement appropriate incentives or control mechanisms to limit use of services by physicians and patients. Under TEFRA, Medicare-eligible PMPs are required to establish quality assurance review programs.

Despite lower costs for care, studies have found little evidence that quality of care in HMOs is below that provided in the fee-for-service sector, although no research to date has examined care provided specifically to Medicare enrollees. 13/ Continuity of care is likely better managed in HMOs, because central records are maintained and care is coordinated. Care for well-defined illnesses for which there is consensus on appropriate treatment is unlikely to differ in HMOs from the fee-for-service sector, since physicians in HMOs are subject to the same standards and at least the same malpractice risk as other physicians. 14/

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13. The Health Care Financing Administration has funded the National Medicare Competition Evaluation to evaluate the quality of care provided in Medicare's risk-sharing plans, but results from that study are not expected until 1987.

14. See M.C. Hornbrook and S.E. Berki, "Practice Mode and Payment Method," *Medical Care*, vol. 23, no. 5 (May 1985), pp. 484-511.

The major concern regarding quality of care in HMOs centers on patients whose conditions cannot be readily identified. Definitive treatment may be delayed, perhaps because of bureaucratic impediments designed to prevent unnecessary treatment based on inconclusive or false test results. Findings from a study in Washington state of fee-for-service and HMO patients with colorectal cancer provide some evidence for this concern. Treatment was comparable once diagnosis was made, but the average time that elapsed between initial contact with a physician and start of treatment (surgery) differed substantially--14 days in the fee-for-service sector, and 47 days in HMOs. During the pretreatment period, HMO patients received significantly more services (tests and consultations with other physicians) than did fee-for-service patients. Despite delays in initiating treatment, no differences in outcome were found between fee-for-service and prepaid patients for the four years following surgery. 15/

MEDICARE VOUCHERS

The Administration has proposed to expand the group of health benefit plans that could qualify for capitation payments under Medicare, by permitting Medicare enrollees who are covered for both Hospital Insurance and Supplementary Medical Insurance to purchase traditional indemnity insurance using vouchers equal to 95 percent of the AAPCC. 16/ Under this proposal, Medicare would make fixed per capita payments on behalf of enrollees who chose this option, but the enrollees would obtain care in the fee-for-service sector and receive insurance reimbursements for part of their costs. The proposal would change the enrollment provisions currently in effect under TEFRA. Enrollees would no longer be free to switch plans at any time during the year. Instead, there would be a nationwide open enrollment period each year and, once a plan was selected, enrollees would be unable to change plans until the next year's enrollment period.

The voucher option would expand choice for Medicare enrollees in two ways:

- In addition to the standard Medicare package or enrollment in qualified PMPs, enrollees could choose to purchase traditional indemnity insurance coverage from private insurers.

15. A. M. Francis and others, "Care of Patients with Colorectal Cancer: A Comparison of a Health Maintenance Organization and Fee-For-Service Practices," *Medical Care*, vol. 22, no. 5 (May 1984), pp. 418-429.

16. The Administration's bill (The Medicare Voucher Act of 1986, S. 1985) was introduced in the Senate on December 18, 1985.

- The proposal would give enrollees a broader choice of benefit packages. Under current law, PMPs must offer the standard Medicare benefit package (and may offer more). Under the voucher proposal, plans would be permitted to offer a variety of benefit packages that differed from the standard Medicare package, so long as average cost-sharing by enrollees on Medicare-covered services under the alternatives would not exceed average cost-sharing for enrollees in the Medicare program (called "actuarial equivalence"). Cost-sharing would be defined to include not only deductible amounts and coinsurance, but also balance-billing amounts and payments for services subject to day or dollar limits under Medicare. Payments for insurance premiums would be excluded from the calculation.

Because the costs to insurers of marketing insurance coverage to individuals is very high, resulting in premiums that are substantially higher than expected benefits, this option would probably appeal only to people who could purchase insurance through a group association. One example would be retired Medicare enrollees who have group health benefits from a former employer--about 6 million people, according to Administration estimates. (Enrollees who are still working and for whom Medicare is a second payer would be ineligible for the voucher.) Under current law, Medicare enrollees are unable to benefit from their employment-based coverage if they choose a prepaid medical plan. With the voucher, the value of Medicare benefits might be combined with employer contributions to purchase a more satisfactory package of benefits.

Unit of Payment

For Medicare, the unit of payment would be the individual enrollee. For the private insurers whose coverage was purchased by enrollees with their vouchers, however, payments would likely be made on a fee-for-service basis. Insurers would face similar incentives as IPAs, in that they would receive a fixed prepaid amount from Medicare (perhaps supplemented by an additional premium paid by each enrollee) in return for agreeing to arrange for a specified benefit package for enrollees, including prescribed limits on average cost-sharing by patients. Insurers would have incentives to institute utilization review programs and to negotiate discounts with selected providers, either to compete with other insurers with a better benefit package or to increase profits. The proposed legislation contains provisions to ensure that private insurers under this option could obtain Medicare rates for hospital stays; Medicare enrollees who chose the voucher option therefore would not lose the benefits of Medicare's market power in the hospital sector.

Payment Rates

Under the Administration's proposal, payment rates would be the same as those paid to PMPs--95 percent of AAPCCs. As with PMPs, there is concern that biased selection of healthier enrollees would increase Medicare's costs--paying more in voucher amounts than voucher enrollees would have cost in the standard Medicare program. As discussed above in the section on PMPs, refinement of the AAPCC could help to reduce, but would probably not eliminate, insurers' incentives to seek out only healthier enrollees.

Assignment

Assignment, and the share of costs paid out-of-pocket by enrollees, is a concern whenever services are rendered in the fee-for-service sector. Under the voucher proposal, just as in the standard Medicare program, there would be no limit on out-of-pocket costs for individual enrollees. Qualified plans would need to show only that their enrollees would pay no more out-of-pocket (excluding premium costs), on average, than those in the standard Medicare program. To accomplish this, plans would likely have to obtain participating agreements with physicians at rates similar to those obtained by Medicare. Under the proposal, there would be no restriction on the supplemental premiums (above the voucher amount) that insurers could charge; the voucher system would rely instead on competition to limit premiums. If the total premium charged by an insurer was much greater than the expected value of the benefit package, Medicare enrollees would likely choose another private insurer or return to the standard Medicare program.

Quality and Volume Controls

Federal determination of actuarial equivalence before qualifying plans to participate in the voucher program would provide some protection to enrollees who chose to use the voucher option, facilitating comparison among competing private insurers and between private insurers and Medicare. Obtaining accurate information on out-of-pocket costs for some items could be difficult, though, making the determination of actuarial equivalence problematic. Further, enrollees choosing the voucher option could be committed to their choice for a full year before being permitted to switch plans or return to the Medicare program, with adverse consequences for enrollees in unsatisfactory plans in the interim.

Excessive use of services by enrollees using the voucher option would not be a federal concern. So long as payment rates were not overly generous, plans would have incentives to limit volume through utilization

review. Problems could arise, though, if some plans imposed such stringent controls that medically necessary services were delayed or unavailable.

CARRIER CAPITATION

Enrollment in prepaid medical plans is unlikely to become the dominant form of care for Medicare enrollees so long as they are free to choose between capitated or fee-for-service care. The proposed Medicare voucher would likely be used primarily (at least initially) by the minority of enrollees whose previous employers provide group health benefits to annuitants. Carrier capitation has been suggested as a way to get the advantages of a capitated payment system that would cover all enrollees, without making PMP enrollment or the proposed voucher option mandatory.

Under a carrier capitation system, one organization could be selected to serve as the Medicare carrier for each geographic area, such as a state. In contrast to the responsibilities of current Medicare carriers, though, this organization would not only administer Medicare claims payments but would also be at risk for providing the Medicare benefit package to all Medicare enrollees living in its jurisdiction. In effect, the federal government would buy the Medicare benefit package on behalf of all enrollees in the jurisdiction at a fixed per capita price from a single underwriting agency. (A residual Medicare program would have to be available in the event that no agency was willing to take the area on a capitation basis, however.) 17/

The carrier capitation approach would be similar to an areawide IPA that served all Medicare enrollees. The carrier would assume responsibility for deciding how and how much to pay physicians who treated Medicare enrollees. Carriers would have financial incentives to negotiate discounts from physicians and other providers, and to implement stringent utilization review programs. The federal role would be changed to one that required it to award capitation contracts, monitor enrollees' access to and quality of care, and evaluate the performance of carriers under contract. Some analysts are concerned about the substantial market power this approach would give the carriers selected. Although market power could enable carriers to obtain substantial discounts from health care providers, it could also be used to eliminate competitors for future Medicare capitation contracts. Another major concern is how to implement effective monitoring for access to and quality of care.

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17. Ira Burney and others, "Medicare Physician Payment, Participation, and Reform," *Health Affairs*, vol. 3, no. 4 (Winter 1984), pp. 5-24.

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Unit of Payment

The unit of payment to carriers would be the Medicare enrollee, and payments would be made for all enrollees in the carrier's jurisdiction. Physicians might continue to treat Medicare enrollees on a fee-for-service basis, however, depending on arrangements made by carriers, since carriers might establish a variety of plans from which enrollees could choose.

The capitation payment to carriers could cover all Medicare services, or only SMI services. Because the principal savings in prepaid plans come through reduced hospitalization, a capitated payment system that did not cover HI services might generate little or no savings over the fee-for-service alternative. In fact, costs might increase. Unless both HI and SMI services were covered by the capitated payment, carriers would have incentives to induce physicians to shift patient care to the hospital in some cases where it was unnecessary--so that carriers would be liable only for the costs of physicians' services and not for facility, nonphysician personnel, or medical supply costs. This incentive would work in tandem with hospitals' incentives under the prospective payment system to increase admissions, especially for uncomplicated cases, and would intensify the need for PRO review to prevent unnecessary hospital admissions.

A capitated payment for both HI and SMI services would not require dismantling of the prospective payment system for hospital services, although dismantling might be permitted in some areas if carriers wanted to replace it with an alternative payment system for hospital services. If the PPS were continued, the intermediaries who administer hospital reimbursements under Medicare could bill carriers for Medicare's share of costs.

Some analysts argue that HI services should be excluded from the capitated payment, because the financial risk assumed by carriers would be reduced. Given the lower risk, more organizations might be willing to compete for capitation contracts, and the risk premium that Medicare would likely have to pay under this approach could be smaller. 18/ If only SMI services were included in the capitated payment, carriers' incentives to shift care to hospitals could be reduced by incorporating offsetting incentives to control the rate of hospitalization in Medicare's contract provisions with carriers. The offsetting incentives might, for example, be bonuses paid by Medicare to carriers whose Medicare admission rates (adjusted for characteristics of the carriers' Medicare population) were below the national average. This option would be preferable to a capitated system for both HI

18. Stanley S. Wallack and Elizabeth C. Donovan, "Capitating Physician Services Under Medicare" (Brandeis Health Policy Research Consortium, Waltham, Massachusetts, January 1985).

and SMI services if the cost of the bonuses was more than offset by savings from reduced risk premiums required by carriers.

Payment Rates

Payment rates to carriers would be intended to cover the costs per enrollee of providing the Medicare benefit package to all enrollees in each carrier's jurisdiction. Carriers would establish payment methods and rates for physicians and other providers in their jurisdictions, subject to conditions specified by the federal government. An advantage of the carrier capitation approach is that problems arising from biased selection of enrollees would be reduced, since all enrollees in a carrier's jurisdiction would be covered. These problems would not be eliminated, however, unless only a single health plan was offered in each jurisdiction.

One option for setting carrier capitation rates would be to set initial rates at the AAPCCs computed for each area, and then to update these rates each year based on an index of costs (such as the Medicare Economic Index) or of national income (such as gross national product). Over time, differences across regions in AAPCC rates for each type of enrollee might be modified to reflect differences in living and practice costs across regions but to reduce or eliminate differences caused by variations in practice patterns. This approach might not adequately account for changes in medical technology, though, or for imbalances between the supply of physicians and the Medicare population in some areas.

Because carriers would be assuming financial risks currently borne by the federal government for Medicare enrollees, some risk premium above administrative costs would be required in addition to the estimated cost of providing health care services for the Medicare population. The premium required to induce agencies to apply for carrier contracts would generally be smaller if carriers were given greater latitude in restructuring the health care delivery system in their jurisdictions. The risk premium could also be reduced if the federal government shared the risk with carriers by limiting both profits and losses for carriers. For example, costs that were 5 percent or more above a carrier's capitation payments could be assumed by the federal government, and carriers whose costs were below their capitation payments could be required to refund profits in excess of 5 percent. Experience with carrier-at-risk Medicaid programs in California and Texas indicate that even limited risk-sharing can induce effective efforts by carriers to control costs. 19/

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19. Wallack and Donovan, "Capitating Physician Services Under Medicare."

Assignment and Other Conditions Related to Access

The federal government could specify a uniform model for health care delivery to be implemented by all carriers, or it could permit carriers to structure their own delivery systems subject to meeting certain specified conditions related to physician participation and out-of-pocket costs for enrollees. Under the latter approach, a number of different programs would evolve in place of the current nationally uniform Medicare program.

One option might be to require that carriers implement an areawide preferred provider organization (PPO) for all Medicare enrollees who do not elect to enroll in prepaid medical plans. (A PPO is a consortium of physicians and perhaps other health care providers who have agreed with an insurer to treat its enrollees at negotiated prices, generally discounted from usual charges.) To assure enrollees' access to care at reasonable out-of-pocket costs, Medicare could require that carriers obtain participation agreements from at least some specified proportion of physicians in each specialty for each locality in their jurisdictions. With the market power of the Medicare population, carriers might be able to obtain substantial discounts on fees from physicians and other providers in the area, although this possibility is untested as yet.

An alternative approach would require carriers to offer Medicare enrollees a choice of options, including the current fee-for-service Medicare package, enrollment in PMPs, and enrollment in PPOs. Again, federal specifications about minimum physician participation rates would be desirable to ensure enrollees' access. This approach would preserve the current Medicare package for enrollees who would prefer it, while expanding their choices to include PPOs and other managed care systems as well. Offering these choices could be confusing for enrollees, however, and difficult for carriers to implement.

Quality and Volume Controls

Under the carrier capitation approach, the major concern for the federal government would be to ensure that carriers were providing at least the minimum package of Medicare benefits to enrollees while keeping their out-of-pocket costs within reasonable limits. Controlling excessive volume would be the carriers' concern. In fact, the principal effect of the carrier capitation approach would likely be to provide carriers with strong financial incentives to implement effective utilization review systems. Medicare, however, might get the same benefits from utilization review through regulatory requirements on carriers under the current system.

APPENDIXES

APPENDIX A

FOREIGN HEALTH CARE SYSTEMS

This appendix discusses financing and delivery of health care in the United States and in four other countries--Canada, the Federal Republic of Germany, the United Kingdom, and Sweden. These four countries were selected for comparison for several reasons. First, they are wealthy industrialized countries like the United States. Second, they provide two contrasts to the United States' mixed public/private health care system: in Canada and West Germany, most of the population is covered by comprehensive public insurance, but the health care delivery system is largely private and similar to that of the United States; in the United Kingdom and Sweden, most health care is provided through a national health service so that both financing and delivery are public.

COMPARISON OF HEALTH CARE SYSTEMS

The U.S. health care system is unusual among industrialized countries: first, because there is no comprehensive public provision for health care; and second, because third-party payers, both public and private, historically have tended to be passive, accepting charges by providers with little effort to negotiate better rates or lower utilization. Only recently have third-party payers in the United States begun to reconsider the blank-check approach to reimbursing providers of health care. In Canada and West Germany, public insurers negotiate rates of reimbursement with private-sector providers, monitor utilization, and control capital expansion. In the United Kingdom and Sweden, most health care is delivered through their national health services, which pay physicians and which own and operate hospitals. (See Table A-1 for a summary comparison of these countries.)

Among the countries selected for comparison, the United States has the smallest percentage of the population covered by public insurance--

TABLE A-1. COMPARISON OF HEALTH CARE SYSTEMS, SELECTED COUNTRIES

	United States	Canada
Characterization of System	Mixed public and private	Comprehensive public insurance
Delivery System	Mostly private	Mostly private
Coverage for Basic Health Care	20 percent public insurance, a/ 65 percent private insurance, 15 percent without coverage	99 percent public insurance, 1 percent without coverage
Number of Third-Party Payers	Many	One in each province
Cost-sharing by Patients for Covered Services	Considerable	Nominal
Percentage of All Health Care Costs Paid Out-of-Pocket by Patients b/	27	N.A.
Physicians' Reimbursement	Primarily fee-for-service payments based on physicians' charges	Negotiated fee schedules
Hospital Reimbursement for Operating Expenses	Varies by payer; payment often based on reported costs or charges	Global budgets

SOURCE: Congressional Budget Office from data provided in American Medical Association, *International Lessons: Medical Societies and Health Policy* (AMA, Chicago, Illinois, 1984); Robert J. Maxwell, *Health and Wealth* (Lexington, Massachusetts: Lexington Books, 1981); and Uwe E. Reinhardt, "The Compensation of Physicians: Approaches Used in Other Countries," HCFA Grant No. 95-P-97309/2 (Princeton University, Princeton, New Jersey, 1985).

TABLE A-1. (Continued)

West Germany	United Kingdom	Sweden
Comprehensive public insurance	National health service	National health service
Mostly private	Mostly public	Mostly public
93 percent public insurance, 7 percent private insurance	100 percent public	100 percent public
Many, but strong national guidelines since 1977	1	One in each locality
Nominal	Nominal	Nominal
12	6	8
Negotiated fee schedules for ambulatory care physicians, salary for hospital-based physicians	Salary (or limited form of capitation for primary care physicians)	Salary
Negotiated per diem rates	Global budgets	Global budgets

NOTE: N.A. = not available.

a. The proportion of the population eligible for Medicare or Medicaid benefits.

b. Does not include premium payments for insurance. These data are for 1975, the latest available for all countries. The corresponding figure for the United States was 28 percent in 1984.

about 20 percent, compared with 93 percent or more for other countries. 1/ Further, the United States has the largest percentage of the population without insurance coverage for basic health care. About 15 percent of the population is without coverage at some time during the year, compared with less than 1 percent for other countries. According to the National Center for Health Services Research, nearly 10 percent of the U.S. population is uninsured throughout the year. 2/

Nearly 30 percent of all health care costs are paid out-of-pocket by patients in the United States, because of a combination of substantial cost-sharing on services covered by insurance, services that are not covered by insurance for any significant part of the population (such as long-term care), and population groups who lack insurance even for basic care. In other countries, out-of-pocket costs are 12 percent or less of the health care total. Most out-of-pocket costs in other countries are for noncovered services--items such as outpatient drugs, dental care, and long-term care. Cost-sharing on covered services is nominal or nonexistent in these other countries.

Other countries provide virtually universal access to comprehensive health care at lower costs relative to gross domestic product (GDP) than the United States (see Table A-2). 3/ In 1982, total health care costs in the United States were 10.6 percent of GDP, compared with 8.2 percent in Canada and in West Germany. Health costs were 9.8 percent of GDP in Sweden and only 5.9 percent of GDP in the United Kingdom. Costs relative to GDP were highest in the United States despite the relatively low proportion of the population that is aged--a group with typically large health care needs (see Table A-3). Costs relative to GDP were lowest in the United Kingdom, which has a high proportion of population age 60 or older.

Part of these cost differences may reflect differences in access to and quality of care across countries. Although it is difficult to assess quality

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1. In Germany, health care is financed primarily from employer/employee contributions instead of general revenues, as in the United Kingdom and Sweden. Nevertheless, these contributions are treated as public health insurance since they are mandatory and hence equivalent to a tax. The same is true in some of the Canadian provinces, and for Hospital Insurance under Medicare in the United States.

2. Pamela J. Farley, "Who are the Underinsured," *Milbank Memorial Fund Quarterly*, vol. 63, no. 3 (Summer 1985), pp. 476-503.

3. GDP is a measure of domestic production, whether the income goes to domestic or foreign residents. GNP is a measure of domestic income, including income produced abroad and excluding income produced here but sent abroad. Data on GDP are more readily available in foreign countries than GNP.

TABLE A-2. HEALTH CARE SPENDING AS A PERCENT OF GROSS DOMESTIC PRODUCT, SELECTED COUNTRIES

Country	1965	1970	1975	1980	1982
United States	6.1	7.6	8.6	9.6	10.6
Canada	6.1	7.2	7.4	7.3	8.2
West Germany	5.1	5.6	8.1	8.1	8.2
United Kingdom	4.2	4.5	5.5	5.7	5.9
Sweden	5.6	7.2	8.0	9.5	9.8

SOURCE: Organization for Economic Cooperation and Development, *Public Expenditure on Health Under Economic Constraints, Part I, Expenditure Trends, Policies, and Problems* (Paris: OECD, April 1984), Table 4.

TABLE A-3. DISTRIBUTION OF POPULATION BY AGE, SELECTED COUNTRIES, 1980-1981 (In percents)

Country	Total Population (In millions)	Distribution by Age			
		0-19	20-39	40-59	60+
United States	229.3	31	33	20	16
Canada	23.9	33	33	21	13
West Germany	61.6	27	28	26	19
United Kingdom	49.2	29	28	23	20
Sweden	8.3	26	29	23	22

SOURCE: Congressional Budget Office, using data from the *United Nations Demographic Yearbook, 1981.*

accurately, some measures of access are available, including the number (per capita) of hospital beds, inpatient days, physicians, and physician visits.

These measures do not indicate that access is markedly better in the United States to account for its higher costs. The number of hospital beds per person is lower in the United States than in the other countries examined, as is the number of inpatient days per person (see Table A-4). The United States is in the middle range compared with the other countries with respect to number of physicians and physicians' visits per capita. The number of physicians' visits per capita in the two countries with national health services is relatively low. One reason for this may be that physicians paid by salary or on a capitated basis (as in the United Kingdom, for primary ambulatory care) have no financial incentives to increase the number of patients seen during the workday. Another reason may be that use of non-physician personnel for minor care is more common in national health services than in the United States.

TABLE A-4. MEASURES OF ACCESS TO HEALTH CARE, SELECTED COUNTRIES, 1980

Country	Hospital Beds per 1,000 Population	Inpatient Days per Capita	Physicians per 1,000 Population	Physicians' Visits per Capita
United States	6.0	1.7	2.0	4.8
Canada	6.8	2.0	1.8	5.4
West Germany	11.5	3.6	2.3	N.A.
United Kingdom	8.1 a/	2.4	1.3	4.2
Sweden	14.2	4.7	2.2	2.6

SOURCE: Organization for Economic Cooperation and Development, *Public Expenditure on Health Under Economic Constraints, Part II, Statistical Annex* (Paris: OECD, April 1984).

NOTES: N.A. = not available.

a. For 1979.

Most analysts of foreign health care systems note, though, that waits for many nonemergency services are common in the national health services of both the United Kingdom and Sweden. Furthermore, in the United Kingdom, certain kinds of health care are rationed on an informal basis; dialysis for end-stage renal disease, for example, is rarely provided for people over age 55. 4/

LESSONS FROM FOREIGN EXPERIENCES

The experiences of Canada and West Germany are more applicable to the United States than those of the United Kingdom or Sweden, because the latter two countries deliver health care through a national health service. In Canada and West Germany, by contrast, the delivery systems for health care are very similar to that in the United States, although the financing systems are different. Since both countries have experienced lower rates of growth in health care and physicians' costs in recent years than the United States, their control mechanisms may be of interest in the United States.

In both Canada and West Germany, physicians outside hospitals are paid on a fee-for-service basis, and patients are free to select their own physicians. The only difference in Canada from practices in the United States is that patients are limited in their access to specialists; full insurance reimbursement will be paid for visits to specialists only if the patient was referred to the specialist by a primary care physician. In Germany, as in the United States, access to specialists is not restricted, but there is a dichotomy between office-based and hospital care that does not exist in the United States or Canada. In Germany, office-based physicians must transfer their patients to hospital-based physicians when hospital care is required.

Throughout the 1970s, Canada was quite successful in constraining the rate of growth in both total health care costs and spending for physicians' services, although growth has accelerated recently (see Table A-5). Constraints on spending for physicians' services are imposed through a combination of mechanisms. First, physicians are paid according to a fee schedule, with annual increases in the schedule negotiated by representatives of physicians and of the provincial insurer. Second, constraints on volume

4. *World Health Systems: Lessons for the United States*, Committee Print 98-430, Select Committee on Aging, U.S. House of Representatives, 98:2 (May 1984), p. 16. See also Henry J. Aaron and William B. Schwartz, *The Painful Prescription: Rationing of Hospital Care* (Washington, D.C.: Brookings Institution, 1984).

increases are imposed to prevent physicians from responding to fee constraints by billing for more services. In Canada, the constraints on volume are less formal than they are in Germany (since 1977), which may account for the recent reversal in the success of efforts to contain costs in these two countries.

Both Canada and West Germany construct physician profiles from claims data to identify physicians whose billing patterns differ from the average. Those with profiles that indicate excessive use of services are notified and warned that failure either to justify or to modify these patterns will result in sanctions, such as reclaiming payments, expulsion from participation in the health insurance program, revocation of license, or charges for fraud, depending on the circumstances. Analysts believe that the monitoring system is generally effective in constraining excessive billing, even though sanctions other than reclaiming payments are rarely applied.

TABLE A-5. AVERAGE ANNUAL RATE OF GROWTH IN HEALTH CARE SPENDING AS A PERCENT OF GROSS DOMESTIC PRODUCT, 1970-1982 (In percents)

	Growth Rates			
	Total Health Care Spending		Spending for Physicians' Services	
Country	1970-1977	1977-1982	1970-1977	1977-1982
United States	2.3	3.6	2.1	4.0
Canada	0.2	2.4	-1.5	2.1
West Germany	4.9	1.0	3.9 a/	0.2 a/ b/

SOURCE: Organization for Economic Cooperation and Development, *Public Expenditure on Health Under Economic Constraints, Part II, Statistical Annex* (Paris: OECD, April 1984). Also, Health and Welfare Canada, *National Health Expenditures in Canada, 1970-1982* (Ottawa, Ontario).

NOTE: N.A. = not available.

a. Includes the services of dentists and clinics as well as physicians.

b. For 1977-1980.

In addition, the two countries impose global caps on total reimbursements for physicians. 5/ If average practice income increases by more than the negotiated fee increase in the previous year--indicating volume increases per physician--then the insurance negotiators are less generous in the fee increase they will approve. Through this mechanism, net income for physicians in Canada fell slightly relative to the average for all workers in Canada during the 1970s. In recent years, however, physicians have become more militant about demanding large fee increases, as indicated by the reversal from declines to increases in spending for physicians' services relative to GDP (see Table A-5). As a result, spending for physicians' services as a percentage of GDP regained in 1982 the level it had in 1970. Physicians have backed their demands for greater fee increases by threatening to bill patients a supplemental charge if the insurance fee is not adequate, a practice that is discouraged by provincial insurers and that is very limited even in those provinces that permit it. Refusing to accept insured patients is not a viable option for physicians who object to fee levels in Canada, since virtually the entire population is covered by the provincial health insurance plans.

Until new legislation on cost control was implemented in 1977, the rate of increase in total health care costs relative to GDP in West Germany was high. Among the measures introduced in 1977 were controls on physicians that are similar to those used in Canada. Physicians (outside of hospitals) were already paid according to a fee schedule, but they had successfully negotiated large rates of increase in the schedule each year, and volume increases had occurred as well. Under the new controls, the central government issued guidelines limiting the increase in fees and in total reimbursements for physicians under each sickness fund (or insurer) to the increase in the earnings of the insured population; thus, in the aggregate, spending for physicians' services has remained fairly constant relative to national income. If total billings increase by more than the allowed amount, the rate of reimbursement is cut back to maintain the cap on total spending. The result is that physicians as a group have been unable to gain through volume increases, although individual physicians might increase their practice incomes relative to the group by greater-than-average billing increases. Monitoring individual physician profiles, as in Canada, helps to reduce this problem.

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5. In Quebec, negotiations between physicians and the provincial health plan focus on income. In the other Canadian provinces, negotiations are on fees, but incomes are monitored and fees may be reduced, as discussed in the text.

One factor that appears to facilitate cost control is the existence of a single payer within an appropriately inclusive region to negotiate with providers. Under these circumstances, providers can neither opt out of the public health system nor play one payer off against another. Negotiations in Canada are provincewide. Negotiations in Germany are local and involve multiple competitive payers (trade-based sickness funds and private insurance companies); this was probably a factor in the rapidly rising fees for physicians before 1977. Since 1977, however, fees and their rate of increase have essentially been set by the central government. 6/

Substantial cost-sharing does not seem to be necessary to contain costs, if effective provider controls exist. Cost-sharing is nominal or non-existent in both Canada and West Germany, because of the belief that co-payments large enough to reduce the demand for care appreciably would reduce access to an undesirable extent.

6. Centralized control may be important even in countries with a national health service. The United Kingdom, which has a centralized health care system, has been more successful at containing the growth of costs than Sweden, where negotiations between a single payer and providers take place at the local level. Competition among localities in Sweden may have spurred more generous settlements and more rapid expansion of health care resources.

APPENDIX B

EFFECTS OF SELECTED FEE SCHEDULE OPTIONS

This appendix presents estimates of the effects on physicians and their Medicare patients of specific options for setting payment rates under a Medicare fee schedule. Of the many combinations of features that could be analyzed, only a small set of illustrative options is presented.

Two fundamental decisions must be made if a fee schedule is to be implemented:

- What physician specialty groups to differentiate and how to define the relative value scale (RVS) for each;
- What geographic areas to identify for rate differentials and how to set the differentials.

The implications of alternative choices for defining differentials by specialty and location are examined in the second and third sections of this appendix, following a discussion of the data base used for the analysis.

THE DATA BASE AND ITS LIMITATIONS

The data used by the Congressional Budget Office for its simulations are Medicare claims submitted for a one-percent sample of physician practices in 41 carrier jurisdictions for calendar year 1984. The fee ceilings or fee schedule rates used for the simulations were based on average submitted charges for all Medicare claims made in the 41 jurisdictions for 1984. 1/ Thus, the relative value scale (RVS) implicit in the fee schedules examined

1. These rates were calculated from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Procedure file, which contains charge information for all services billed to Medicare. Although rates could, in principle, be based on average allowed amounts instead, this was not done because reporting errors made the calculation of the number of times a given service was paid for by Medicare suspect for nearly 95 percent of the charges recorded on the procedure file.

here replicates the current structure of submitted charges by physicians, which many analysts believe should be modified. The effects obtained reflect the results of eliminating the large variation among physicians in payment for the same service, but incorporate little modification in average payments for some services relative to others.

Fifteen of the 56 Medicare carriers were eliminated from the analysis because of various problems in reporting the data. The remaining 41 carriers processed claims representing about two-thirds of Medicare's allowed amounts for 1984. Overall, counties in the carrier jurisdictions that were used were very similar to the national average in the proportion that were urban, in wage levels (as measured by the PPS wage index), in poverty rates, and in per capita income. By census region, however, the jurisdictions excluded in the East were more urban, and those excluded in the other census regions were less urban, than those included in the analysis (see Table B-1).

Claims for the services of radiologists, anesthesiologists, and pathologists were eliminated because of difficulties in establishing appropriate payment rates for these specialties for 1984. 2/ Claims by pediatricians, psychiatrists, and osteopathic physicians were also eliminated because so few services were provided to Medicare enrollees by these groups. For the specialty groups included in the analysis, the distribution of Medicare's allowed amounts in the sample was similar to the distribution by specialty of all allowed amounts for 1984 (see Table B-2).

To reduce computation costs, only the top 258 services (ranked by total allowed amounts in 1984) were used for the analysis. These services accounted for about 70 percent of all charges approved by Medicare for the physicians in the sample, although this varied by specialty group. 3/ The 258

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2. Before October 1, 1983, the patient-related services of radiologists and pathologists were often billed by hospitals instead of physicians (a practice known as combined billing). Hospitals' allocation between the patient-related and administrative services of these physicians was sometimes arbitrary. As a result, when combined billing was eliminated in 1983, the customary fee profiles recorded by carriers and used for payment in 1984 for these physicians may not have been representative of appropriate charges for their services. The services of anesthesiologists are not reported in a consistent manner by carriers and the information reported is therefore difficult to use.

3. These services accounted for 80 percent of approved charges, before eliminating claims for which the service codes in HCFA's Common Procedure Coding System (HCPCS) had modifiers attached. (Carriers use modifiers to indicate a range of special circumstances associated with the claim.) Only allowed claims for services reported without modifiers were used, in an effort to ensure that a homogeneous set of services was described by a given HCPCS code.

TABLE B-1. COMPARISON OF COUNTIES IN CARRIERS' JURISDICTIONS TO NATIONAL AVERAGES, BY CENSUS REGION

	Percent of Counties That Are Urban a/	Average Wage Index b/	Average Poverty Rate c/	Average Per Capita Income d/
All Carriers	23.6	1.00	13.5	9,049
Northeast	56.7	1.11	10.3	10,180
North Central	18.5	1.01	11.0	9,564
West	18.7	1.13	11.6	9,511
South	23.8	0.94	16.5	8,344
Carriers Included	25.6	1.02	13.5	9,069
Northeast	49.7	1.08	10.2	9,706
North Central	22.0	1.05	10.5	9,758
West	21.8	1.15	11.6	9,766
South	24.9	0.94	17.5	8,102
Carriers Excluded	19.8	0.97	13.4	9,011
Northeast	89.5	1.25	10.7	12,417
North Central	12.4	1.00	11.9	9,227
West	7.0	1.04	11.4	8,527
South	22.2	0.92	15.0	8,705

SOURCE: Congressional Budget Office tabulations from the Health Resources and Services Administration's May 1985 Area Resources file.

a. Urban counties are those that are part of a metropolitan statistical area.

b. The prospective payment system (PPS) wage index, based on hospital survey data.

c. For 1980.

d. For 1982, in dollars.

TABLE B-2. PERCENT DISTRIBUTION OF MEDICARE'S ALLOWED AMOUNTS BY SPECIALTY, NATIONWIDE AND FOR A ONE-PERCENT SAMPLE OF PROVIDERS, 1984

Specialty	Percent Distribution of Allowed Amounts		
	Nationwide for All Services a/	In the Sample for All Services b/	In the Sample for 258 Services b/
Generalists			
General practice	7.9	7.8	8.2
Family practice	5.0	5.0	5.9
Internal medicine	23.8	20.8	24.8
Nonsurgical Specialists			
Allergy	0.6	0.6	0.2
Cardiology	7.6	7.0	7.7
Dermatology	1.7	2.5	1.6
Gastroenterology	2.0	1.7	2.0
Nephrology	1.2	0.8	0.5
Neurology	1.7	1.4	1.5
Physical medicine	0.4	0.1	0.2
Pulmonary disease	1.5	1.2	1.3
Surgical Specialists			
General surgery	11.2	10.2	9.3
Otolaryngology	1.4	1.3	0.7
Neurosurgery	1.5	1.6	1.1
Gynecology	1.0	2.2	2.4
Ophthalmology	14.4	17.2	17.5
Orthopedic surgery	7.0	8.9	7.2
Plastic surgery	0.6	0.8	0.4
Colon and rectal surgery	0.2	0.2	0.2
Thoracic surgery	4.6	4.8	3.6
Urology	4.6	3.9	3.5

SOURCE: Congressional Budget Office.

a. Tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Procedure file.

b. Tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

services accounted for 80 percent of all Medicare charges for generalists, 68 percent for nonsurgical specialists, and 62 percent for surgical specialists. Since all effects are presented as percent changes from current amounts, this variation by specialty in the proportion of total allowed amounts accounted for by the 258 services should not distort the results so long as the services used are representative for each specialty. Summary information about the data base is shown in Table B-3.

The national claims data base used here permits some advance over previous studies of physicians' fees, which had to rely on analysis of claims data from single carriers. Because of the broad national representation in the data base, the simulated effects of specific payment changes under Medicare by physician specialty and by urban/rural location are more likely to be an accurate representation of what would happen, on average nationwide, from Medicare policy changes. Because of the exclusion of several large carriers, however, the simulated effects on physicians by region are misleading. Consequently, effects are not reported by region.

Using a national data base that combines claims records from different Medicare carriers has some disadvantages. Because there may be systematic differences among the carriers in how claims information is recorded, simulation results may in some cases be misleading. For example, in most carrier regions, physicians did not report their services for 1984 using HCFA's Common Procedure Coding System; instead, carriers translated the services reported using other coding systems into HCPCS. It is uncertain how consistent the translations were from one carrier to another. In addition, even if services were reported in HCPCS, physicians differ in how they code given services--especially for visits, which are poorly defined.

The simulations are static, in that they assume unchanged behavior by physicians and their patients. The results are indicative of the initial financial effects of the alternative options, which might then be modified by the responses of physicians and their patients--such as changes in assignment or in use of services.

The simulations focus on the effects on the practice receipts of physicians--either Medicare's approved charges, payments by or on behalf of all Medicare patients (which would include balance-billing on unassigned claims), or payments by or on behalf of all patients including those who are not Medicare enrollees. Because the simulations are obtained from a sample of providers, not enrollees, it is possible to assess the impact on total practice income derived from Medicare patients but not the impact on patients' total liabilities for copayments and balance-billing. The impact on

TABLE B-3. PHYSICIANS' PRACTICE RECEIPTS AND PATIENTS' LIABILITIES, 1984 (In dollars)

Physician Practices by Specialty and Location	Number of Practices in the Sample	Current Receipts Per Practice			Patients' Liabilities Per Service d/
		Medicare Allowed Amounts a/	Revenue from Medicare Patients b/	Revenue from all Patients c/	
All Practices e/	1,952	32,164	36,403	105,812	15
Generalists					
General practice	348	14,816	17,111	54,821	10
Family practice	192	19,384	22,130	84,376	10
Internal medicine	398	39,099	44,981	90,417	11
Specialists					
Nonsurgical f/	250	37,885	41,873	143,138	16
Surgical g/	764	37,792	42,519	130,230	27
All Practices by Location					
Nonmetropolitan	283	27,892	32,637	92,205	10
Metropolitan	1,669	32,888	37,042	108,119	16

SOURCE: Congressional Budget Office tabulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Medicare's reimbursements are 74 percent of allowed amounts, on average. Reimbursements reported on the 1984 Medicare Annual Data files are not reliable.

b. Medicare's allowed amounts on assigned claims; billed amounts on unassigned claims. This assumes that patients pay their share in full.

c. Estimates, based on average Medicare reimbursements as a share of average practice income, by specialty. This is income per practice (as identified by Medicare carriers), not per physician. A practice may include more than one physician, and physicians may receive income from more than one practice.

d. Average patient out-of-pocket expenses per service rendered, including deductible amounts, coinsurance on allowed amounts, and balance-billing.

e. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts in 1984) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

f. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

g. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

practice income from all patients is an estimate of average impact by specialty (not by practice), which is only partially derived from the simulations. 4/

Although information is presented about the impact of each option on Medicare patients' liabilities per service, these effects are discussed only in the concluding section. Patients' liabilities include the deductible amount, coinsurance on approved charges, and balance-billing on unassigned claims. The simulations assume that all patient liabilities are paid in full.

The simulated results may understate the impact on receipts from Medicare patients and on receipts from all patients--and probably overstate the impact on patients' liabilities--because assignment rates reported in the 1984 data are below those currently reported for physicians' services to Medicare enrollees. (Charge-based assignment rates for physicians' services are currently above 60 percent, but are only about 52 percent in the data used for this study.) There are two reasons for the relatively low assignment rates in the data. First, whether assignment was accepted was not reported for about 11 percent of approved charges in the data: all of these charges were treated as unassigned claims, although some of them were probably assigned. Second, assignment rates have increased sharply since 1984, as discussed in Chapter II.

All of the options examined in this appendix are designed to be budget-neutral nationwide; that is, aggregate Medicare costs nationwide would be unchanged by the new payment rates, although the distribution of payments across physicians would change. Budget-neutrality nationwide was imposed for analytical reasons, so that the effects of changing the structure of payment rates could be seen in isolation, without the added complication of a change in total payment amounts. All options, however, could as easily be examined in the context of an increase or a decrease in aggregate Medicare payments.

SPECIALTY DIFFERENTIALS

A fee schedule might permit no differentials by specialty, paying the same amount for a given service to all physicians, or it might permit differentials

4. Estimates for revenue from all patients were obtained using average Medicare reimbursements as a share of practice income, by specialty, reported by Arthur Owens, "How Much of Your Money Comes from Third Parties?" *Medical Economics* (April 4, 1983), pp. 254-263.

by specialty for some or all services. Seven specialty groups were used for those alternatives that would permit specialty differentials (see Table B-4). The seven groups were defined by the number of years of graduate medical education required to be board-eligible, with one exception. By the education requirement, family practitioners and internists would be in the same group, since both require three years of graduate medical education. These physicians were put in separate groups, though, because of the more general nature of the family practitioner's specialty training, which involves a mix of internal medicine, pediatrics, and other specialties. 5/ If a fee schedule with specialty differentials were implemented, however, the definition of specialty groups and the differentials for each might depend not only on training time, but also on such factors as whether certain specialties were in over- or undersupply and what differentials had been paid historically.

In this section, four options for setting specialty differentials are examined, including:

- A full fee schedule with no specialty differentials;
- A full fee schedule with specialty-specific relative value scales;
- A full fee schedule with specialty-specific multipliers; and
- A partial fee schedule, for procedures only, with customary, prevailing, and reasonable (CPR) rates for visits and consultations.

The carriers' designation of specialty, which is generally the result of self-designation by physicians, was used. As discussed in Chapter IV, nearly half of physicians claiming a specialty are not certified in that specialty. Far more physicians who currently bill as specialists would be adversely affected under the options that allow specialty differentials if all physicians without board-certification in their specialty were paid the same rates as general practitioners. This alternative could not be analyzed, however, because the data used here do not indicate whether physicians are board-certified or not.

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5. Although some of the specialties in the two groups requiring four and five years of graduate medical education face very different malpractice risks--depending largely on whether the specialty is a surgical one or not--these costs are more appropriately recognized in payment rates for specific services, rather than in higher payment rates for all services provided by surgical specialties.

TABLE B-4. PHYSICIAN SPECIALTY GROUPS

Grouping	Requirements for Board-Eligibility
General Practice	No board-certification available. States require one or two years of residency training to practice.
Family Practice	Three years graduate medical education in a mix of specialties.
General Internal Medicine	Three years graduate medical education in internal medicine.
Dermatology Neurology Physical Medicine Otolaryngology Gynecology Ophthalmology	Four years graduate medical education in specialty selected.
Allergy Cardiovascular Disease Gastroenterology Pulmonary Disease Nephrology General Surgery Orthopedic Surgery Plastic Surgery Urology	Five years graduate medical education in specialty selected.
Neurosurgery Colon and Rectal Surgery	Six years graduate medical education in specialty selected.
Thoracic Surgery	Seven years graduate medical education in specialty selected.

SOURCE: Congressional Budget Office using information in American Board of Medical Specialties, *Annual Report and Reference Handbook, 1984* (Evanston, Illinois: ABMS).

For all of the options, location-specific multipliers were selected such that aggregate Medicare payments to each state would be unchanged under the fee schedule from current amounts allowed under the CPR system; that is, the fee schedules examined in this section were designed to be budget-neutral for each state, as well as nationwide, to facilitate comparison with previous studies, all of which obtained results for fee schedules that were budget-neutral in the individual states they examined (California, Washington, and South Carolina). 6/

Statewide Fee Schedules With No Specialty Differentials

A statewide fee schedule with no specialty differentials is the only alternative that has been examined in previous studies. Those studies used average allowed amounts to define the relative value scale, however, while average billed amounts are used here. (An RVS based on average allowed amounts could not be reliably calculated, as explained in footnote 1.)

The results obtained here by specialty are generally consistent with those obtained previously. Average receipts for generalists would increase at the expense of surgical specialists (see Table B-5). Even though generalists would gain substantially on average, about 10 percent of general and family practitioners would lose 10 percent or more in allowed amounts under this option, and nearly 30 percent of internists would be so affected. 7/

Allowed amounts would increase by an average of 13 percent for general and family practitioners, but would fall by nearly 5 percent for surgical specialists. The effects on physicians' revenues from Medicare patients would generally be smaller, because physicians' revenues from unassigned claims would not be affected by changes in Medicare's payment rates. Revenues from all patients would change by less than 2 percent, on average, because Medicare patients account for only a small portion (less than 20 percent) of physicians' gross receipts.

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6. See Chapter V and the Appendix in David Juba, "Analysis of Issues Relating to Implementing a Medicare Fee Schedule," Report No. 3481-01 (Urban Institute, Washington, D.C., November 1985), for a summary of previous results.

7. Tables B-5 through B-12 show the unweighted percentages of practices that would gain or lose 10 percent or more in Medicare's allowed amounts. Results were also obtained for practices weighted by allowed amounts for each practice, with similar findings.

TABLE B-5. STATEWIDE FEE SCHEDULES WITH NO SPECIALTY DIFFERENTIALS, BUDGET-NEUTRAL BY STATE

Physician Practices by Specialty and Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
All Practices a/	0.0	0.0	0.0	-0.1	33.7	41.6	24.7
Generalists							
General practice	13.4	5.5	1.7	-5.7	53.0	36.9	10.1
Family practice	12.8	6.3	1.7	-3.9	52.1	37.5	10.4
Internal medicine	1.2	1.0	0.5	0.2	25.4	44.7	29.9
Specialists							
Nonsurgical b/	-0.4	0.9	0.3	2.2	30.8	40.0	29.2
Surgical c/	-4.6	-2.8	-0.9	0.8	25.5	43.8	30.7
All Practices by Location							
Nonmetropolitan	9.2	5.1	1.8	0.4	46.6	36.0	17.3
Metropolitan	-1.3	-0.8	-0.3	-0.2	31.5	42.6	25.9

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

c. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

One way in which the results of CBO's simulations differ from those reported in previous studies is that internists would gain along with general and family practitioners, although to a lesser extent. Previous studies indicated that allowed amounts for internists would fall by about half as much (in percents) as general and family practitioners would gain. For example, CBO's analysis of claims data for Washington state indicated that, if a statewide fee schedule based on average allowed amounts were implemented, internists' allowed amounts would fall by 3.8 percent while allowed amounts for general and family practitioners would increase by between 6.4 percent and 6.8 percent. Internists would fare better under a fee schedule based on billed amounts because they would be paid relatively more for hospital visits (a large component of their service mix) than under a fee schedule based on average allowed amounts.

General and family practitioners would likely be paid more per hour than more highly trained specialists under this option, though. A nationwide survey of medical practices conducted from 1975 through 1977 found significant differences by specialty in the time physicians spent with patients during visits. 8/ On average, general practitioners spent only three-quarters of the time spent by internists during a "limited" office visit, for example. If this remains true, paying the same fee to all physicians for a given type of visit would result in a higher rate of pay (per unit of time) for general practitioners than for internists and other specialists. 9/ If the HCPCS visit codes were redefined to reflect time, gains for general and family practitioners under a fee schedule with no specialty differentials would likely be substantially lower than those shown here, and gains for internists would likely be larger.

Statewide Fee Schedules With Specialty Differentials for Some Services

Specialty differentials could be obtained in either of two ways: by defining a separate relative value scale for each specialty group (based here on average billed amounts nationwide by physicians in that group); or by

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8. Robert C. Mendenhall, *Medical Practice in the United States* (Princeton, New Jersey: Robert Wood Johnson Foundation, 1981).

9. In fact, general practitioners might currently be paid more per hour. Average allowed amounts nationwide for limited office visits by general practitioners are about 85 percent of average amounts allowed to internists for the same type of visit. If visits with general practitioners are still only about 75 percent as long as those with internists, then general practitioners are receiving a higher rate of pay per unit of time.

applying specialty-specific multipliers to a relative value scale that was uniform across all specialties, where the multipliers could be designed to reflect each specialty's training costs, for example. The first method--defining charge-based specialty-specific relative value scales--might better allow for systematic differences by specialty in how service codes are used, but would base all specialty differentials on current charge patterns whether or not they were justified. The second method--applying specialty-specific multipliers to a single relative value scale--might be an appropriate method if all services were well defined and coded consistently by physicians. Visits are poorly defined in HCPCS, however, and, as discussed above, there may be significant differences among physicians in how each visit code is used. Further, specialty-specific multipliers based only on graduate medical education would not take account of shortages or excess supply for some specialties.

Both of these alternatives are examined here, along with a third alternative that would retain CPR payment rates for visits and consultations (pending coding changes) while introducing a fee schedule for procedures.

Specialty-Specific Relative Value Scales. Results were obtained for two variants of this option--one that would permit specialty differentials only for visits and consultations, and one that would permit differentials for all services including procedures (see Table B-6). Although results for options that would permit specialty differentials are quite different from the alternative with no specialty differentials, the two variants discussed in this section are very similar. This is because only one or two specialties typically account for most of the claims for a given kind of procedure, so that payment rates for procedures are effectively already specialty-specific under the CPR system.

If specialty differentials were paid for visits and consultations based on each specialty group's billed amounts, the average increase in receipts for general practitioners would be smaller than if no differentials were paid, and the losses for surgical specialists would also be smaller. The increase in allowed amounts, for example, would be 4.1 percent for general practitioners under this option, compared with 13.4 percent under the option with no specialty differentials (see Table B-5). The average decrease in allowed amounts for surgical specialists would be 3.3 percent under this option, compared with a decrease of 4.6 percent if no specialty differentials were paid. Internists, on the other hand, would experience bigger gains in receipts under this option than under one without specialty differentials, because their fees for visits would not be reduced to the lower average that would result from including fees charged by general and family practitioners.

TABLE B-6. STATEWIDE FEE SCHEDULES WITH SPECIALTY-SPECIFIC RELATIVE VALUE SCALES, BUDGET-NEUTRAL BY STATE

Physician Practices by Specialty and Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Specialty Differentials for Visits and Consultations; No Differentials for Procedures							
All Practices a/	0.0	-0.2	-0.1	-0.8	30.2	43.8	26.0
Generalists							
General practice	4.1	1.5	0.5	-1.5	38.0	40.3	21.6
Family practice	-2.9	-1.2	-0.3	-0.1	24.0	45.8	30.2
Internal medicine	5.3	2.4	1.2	-2.9	31.2	48.2	20.6
Specialists							
Nonsurgical b/	0.3	1.3	0.4	1.3	30.8	38.4	30.8
Surgical c/	-3.3	-2.2	-0.7	-0.2	27.6	44.2	28.2
All Practices by Location							
Nonmetropolitan	7.3	4.0	1.4	1.6	36.7	44.9	18.4
Metropolitan	-1.1	-0.8	-0.3	-1.1	29.1	43.6	27.3
Specialty Differentials for All Services							
All Practices a/	0.0	-0.1	0.0	-0.8	30.4	43.5	26.1
Generalists							
General practice	3.2	1.1	0.4	-1.2	36.3	40.3	23.3
Family practice	-3.6	-1.5	-0.4	0.4	24.0	45.8	30.2
Internal medicine	4.4	1.9	1.0	-2.5	29.6	49.0	21.4
Specialists							
Nonsurgical b/	2.2	2.6	0.8	1.8	33.6	38.0	28.4
Surgical c/	-3.2	-2.1	-0.7	-0.7	28.6	43.3	28.1
All Practices by Location							
Nonmetropolitan	7.0	4.0	1.4	1.7	36.4	45.6	18.0
Metropolitan	-1.0	-0.7	-0.2	-1.1	29.4	43.1	27.5

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

c. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

Family practitioners would lose under this alternative, providing another example of an instance in which the choice between using billed amounts or allowed amounts to define the RVS significantly alters the results. Using allowed instead of billed amounts to define specialty-specific fee schedules would be more favorable to family practitioners, because Medicare's allowed amounts are typically a higher proportion of billed amounts for family practitioners than for other specialty groups. 10/ Using specialty-specific multipliers applied to a single RVS would also be more favorable to family practitioners than would this alternative, so long as the multipliers were directly related to years of graduate medical education, because family practitioners' payment rates would then be the same as those paid to internists (see the next section).

Specialty-Specific Multipliers. The specialty-specific multipliers used here were designed to compensate physicians with specialty training for the costs of their extra years of medical education compared with general practitioners, who enter practice with no further education beyond one or two years of residency training. 11/ The multipliers were applied to a single relative value scale based on average billed amounts for all physicians, but only for visits and consultations. No specialty differentials were permitted for procedures. Since current charges for procedures are used to define the relative value scale, the additional training costs of the specialties most likely to perform specific procedures are probably already incorporated to a large extent. Applying specialty-specific multipliers as well would therefore doubly compensate specialists for their training.

This option would differ from the alternative that would permit no specialty differentials primarily in the treatment of general practitioners and nonsurgical specialists (see Table B-7). General practitioners would fare

10. Family practitioners are classified as specialists, rather than as general practitioners, in many carrier jurisdictions. Consequently, the payment rate ceilings they face are higher than for general practitioners, while billed amounts are often similar for family and general practitioners.

11. A multiplier was calculated for each specialty group that would, if applied to the visit rates paid to general practitioners, increase the discounted earnings stream of each specialty group by just enough to compensate them for the estimated costs of their additional education. Consequently, the discounted value of the expected earnings stream for each specialty group would be identical to that expected for general practitioners, making medical students financially indifferent between going on for specialty training or not. Average stipends paid to residents in specialty training were obtained for 1983 from the Association of American Medical Colleges. Starting income for general practitioners for 1983 was obtained from the American Medical Association. A 3 percent real rate of discount was assumed.

TABLE B-7. STATEWIDE FEE SCHEDULES WITH SPECIALTY-SPECIFIC MULTIPLIERS, BUDGET-NEUTRAL BY STATE

Physician Practices by Specialty and Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Specialty Differentials for Visits and Consultations; No Differentials for Procedures							
All Practices a/	0.0	0.1	0.0	0.3	36.1	39.9	24.0
Generalists							
General practice	7.9	3.1	1.0	-3.3	45.5	38.0	16.4
Family practice	13.5	6.7	1.8	-3.8	53.6	35.9	10.4
Internal medicine	1.2	0.9	0.5	-0.1	27.1	44.5	28.4
Specialists							
Nonsurgical b/	3.5	3.5	1.0	1.7	39.6	36.8	23.6
Surgical c/	-5.0	-2.9	-0.9	1.5	31.0	40.3	28.8
All Practices by Location							
Nonmetropolitan	8.7	4.9	1.7	1.1	45.9	36.4	17.7
Metropolitan	-1.3	-0.6	-0.2	0.2	34.5	40.4	25.1

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

c. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

less well under this option than under one with no specialty differentials because they would be paid lower rates for visits and consultations, reflecting the absence of specialty training. Nonsurgical specialists would do better under this option because they would be paid above-average rates for visits, based on the costs of their additional medical education.

Unlike the option with no specialty differentials, this alternative would recognize that the services provided by specialists during a visit of a given type may be more skilled than those provided by general practitioners. It would not allow for differences among physicians in how the visit codes are used, though. Consequently, family practitioners might be paid more per hour under this option than internists--although their additional training costs are the same--because visits of a given type tend to be shorter with family practitioners than with internists.

Partial Fee Schedules, for Procedures Only. Another alternative might be to implement a fee schedule for procedures, while delaying implementation of a fee schedule for visits and consultations until better definitions for those services have been developed. In the meantime, rates for visits and consultations could be based on the CPR system.

This option would have very limited effects, since physicians' receipts for visits and consultations--a substantial component of practice revenues for most physicians--would be unchanged. All generalists would gain a little (1.0 percent to 1.6 percent in allowed amounts, for example) from higher rates for the procedures they perform. Gains for nonsurgical specialists would be higher than for generalists. Surgical specialists would experience a drop in revenues, on average. Overall, about 6 percent of practices would lose 10 percent or more in allowed amounts, with surgical specialties affected the most. Eleven percent of practices would gain 10 percent or more in allowed amounts, while more than 82 percent of practices would experience either gains or losses that were less than 10 percent of allowed amounts. The effects on revenues from Medicare patients and from all patients would be much smaller, on average, than the effects on allowed amounts (see Table B-8).

LOCATION DIFFERENTIALS

Once a relative value scale (with or without specialty differentials) had been established, location-specific multipliers could be designed to adjust the level of payment rates to reflect local differences in customary charge levels or in physicians' costs--just as DRG rates are adjusted for local wage costs under the prospective payment system, using the PPS wage index.

TABLE B-8. STATEWIDE PARTIAL FEE SCHEDULES, PROCEDURES ONLY, BUDGET-NEUTRAL BY STATE

Physician Practices by Specialty and Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
CPR Rates for Visits and Consultations; Fee Schedule for Procedures							
All Practices a/	0.0	-0.3	-0.1	-0.9	11.3	[illegible]	6.3
Generalists							
General practice	1.2	0.1	0.0	-0.4	9.2	88.2	2.6
Family practice	1.6	0.4	0.1	-1.7	8.9	88.5	2.6
Internal medicine	1.0	0.2	0.1	-1.2	8.3	88.4	3.3
Specialists							
Nonsurgical b/	3.3	2.5	0.7	-0.1	20.0	74.4	5.6
Surgical c/	-2.1	-1.6	-0.5	-0.9	11.6	77.6	10.7
All Practices by Location							
Nonmetropolitan	1.1	0.2	0.1	2.1	14.8	80.6	4.6
Metropolitan	-0.2	-0.4	-0.1	-1.3	10.7	82.7	6.6

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.

c. Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.

Adjusting payment rates by state would probably be appropriate, because taxes, licensing and insurance regulations, and legal systems--all with potential effects on physicians' costs--vary by state. Setting payment rates separately for metropolitan and nonmetropolitan areas within each state might also be desirable, although the need for this further refinement is less clear, as discussed in Chapter II. The results presented in this section indicate that there would be little reason to vary payment rates for all of the pay localities currently recognized by carriers. Payments would be substantially the same if there were only two types of localities in each state--metropolitan and nonmetropolitan.

A variety of choices for setting location-specific monetary multipliers are examined. The location alternatives examined here use monetary multipliers that would:

- Not vary--a nationwide fee schedule;
- Vary by state--either to be budget-neutral for each state or based on costs;
- Vary by state and between metropolitan and nonmetropolitan areas within each state--either to be budget-neutral for each area or based on costs; and
- Vary by each of the pay localities currently recognized by Medicare carriers--either to be budget-neutral for each locality or based on costs.

For the variants that were budget-neutral by location, multipliers were set so that Medicare's aggregate payments by location would be no different under the fee schedule than under the current system. Cost-based multipliers were designed to reflect cost differences by location (as measured by the PPS wage index), so that Medicare's aggregate payments by location might change (although aggregate payments nationwide would not). 12/ As discussed in Chapter IV, the PPS wage index may adequately account for differences in physicians' costs by location for the nearly 80 percent of costs that reflect earnings, but it probably does not account well for differences in the other 20 percent of costs--for office space, supplies, and malpractice insurance. Further, it may overstate urban/rural differences in costs for physicians.

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12. A physician-weighted average of the PPS wage index for each county was calculated statewide, separately for metropolitan and nonmetropolitan counties in each state, and separately for each pay locality.

Summary results are presented for each of the specialty alternatives examined in the previous section. The results are for all physician specialty groups combined, both for all practices nationwide and separately for practices in metropolitan and nonmetropolitan areas. The pattern of effects from alternative location-specific multipliers is similar for the first three specialty variants, and discussion therefore focuses on only the first option--with no specialty differentials (see Tables B-9, B-10, and B-11). Effects by location for the fourth specialty option--a partial fee schedule, for procedures only--sometimes differ from the effects for the first three variants (see Table B-12). These differences are discussed where appropriate.

By design, the average effect nationwide on allowed amounts would be zero for every alternative. The effects on revenues from Medicare patients and from all patients would not necessarily be zero, but they would be very small for all alternatives, on average nationwide. In no instance would average receipts nationwide change by as much as 1 percent.

The effects on practices located either in metropolitan or nonmetropolitan areas are larger, though. In general, revenues for practices in nonmetropolitan areas would increase, while they would decrease for practices in metropolitan areas. The average gains for nonmetropolitan practices would generally be substantial, while losses for practices in metropolitan areas would be quite small, because there are so many more metropolitan than nonmetropolitan practices.

Nonmetropolitan gains and metropolitan losses would be bigger as larger geographic areas were incorporated for payment purposes. For example, allowed amounts for nonmetropolitan practices would increase by 23 percent, on average, under a nationwide fee schedule with no specialty differentials (see Table B-9). If fees were set by state, instead, allowed amounts for nonmetropolitan practices would increase by between 9 percent and 15 percent. If fees were set separately for areas within each state, either by metropolitan status or using the pay localities currently defined by carriers, allowed amounts for nonmetropolitan practices would increase by only 3 percent or 4 percent, at most.

In general, nonmetropolitan areas would fare better under the alternatives that used cost-based multipliers than under those that used location-specific, budget-neutral multipliers. This is because urban/rural differentials in Medicare's current payment rates are typically larger than would be justified on the basis of costs (at least as measured by the PPS wage index). The disparity between payment rates and costs exists primarily for visits and not for procedures, though. Consequently, nonmetropolitan areas would fare less well with cost-based than with location-specific, budget-neutral multipliers under a partial fee schedule for procedures only (see Table B-12).

TABLE B-9. ALTERNATIVE LOCATION-SPECIFIC MULTIPLIERS, FOR A FEE SCHEDULE WITH NO SPECIALTY DIFFERENTIALS

Physician Practices by Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Nationwide, Budget-Neutral							
All Practices a/	0.0	0.5	0.2	1.3	38.1	31.6	30.3
Nonmetropolitan	22.7	11.7	4.1	-2.9	61.1	28.6	10.2
Metropolitan	-3.3	-1.2	-0.4	1.9	34.2	32.1	33.7
By State, Budget-Neutral							
All Practices a/	0.0	0.0	0.0	-0.1	33.7	41.6	24.7
Nonmetropolitan	9.2	5.1	1.8	0.4	46.6	36.0	17.3
Metropolitan	-1.3	-0.8	-0.3	-0.2	31.5	42.6	25.9
By State and Urban/Rural, Budget-Neutral							
All Practices a/	0.0	0.1	0.0	0.1	32.2	43.3	24.5
Nonmetropolitan	0.0	1.1	0.4	1.5	40.6	43.1	16.3
Metropolitan	0.0	-0.1	0.0	-0.1	30.7	43.4	25.9
By Carriers' Current Pay Localities, Budget-Neutral							
All Practices a/	0.0	0.4	0.1	1.2	29.4	46.9	23.8
Nonmetropolitan	0.0	1.0	0.3	2.2	39.9	41.7	18.4
Metropolitan	0.0	0.3	0.1	1.0	27.6	47.8	24.7
By State, Based on Cost Index b/							
All Practices a/	0.0	0.2	0.1	0.7	35.1	36.4	28.5
Nonmetropolitan	15.4	7.9	2.8	-1.6	47.3	34.6	18.0
Metropolitan	-2.2	-0.9	-0.3	1.0	33.0	36.7	30.3
By State and Urban/Rural, Based on Cost Index b/							
All Practices	0.0	0.3	0.1	0.9	35.4	38.9	25.7
Nonmetropolitan	2.8	2.8	1.0	2.2	46.6	36.0	17.3
Metropolitan	-0.4	-0.1	0.0	0.7	33.5	39.4	27.1
By Carriers' Current Pay Localities, Based on Cost Index b/							
All Practices a/	0.0	0.3	0.1	0.9	35.5	38.0	26.5
Nonmetropolitan	4.0	3.2	1.1	2.6	45.9	37.1	17.0
Metropolitan	-0.6	-0.1	0.0	0.7	33.7	38.2	28.2

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Using the prospective payment system (PPS) hospital wage index.

TABLE B-10. ALTERNATIVE LOCATION-SPECIFIC MULTIPLIERS, FOR A FEE SCHEDULE WITH SPECIALTY-SPECIFIC RELATIVE VALUE SCALES

Physician Practices by Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Nationwide, Budget-Neutral							
All Practices a/	0.0	0.3	0.1	0.6	36.6	32.7	30.7
Nonmetropolitan	19.7	9.9	3.5	-1.5	58.7	29.0	12.4
Metropolitan	-2.8	-1.1	-0.4	0.9	32.9	33.3	33.8
By State, Budget-Neutral							
All Practices a/	0.0	-0.2	-0.1	-0.8	30.2	43.8	26.0
Nonmetropolitan	7.3	4.0	1.4	1.6	36.7	44.9	18.4
Metropolitan	-1.1	-0.8	-0.3	-1.1	29.1	43.6	27.3
By State and Urban/Rural, Budget-Neutral							
All Practices a/	0.0	-0.1	0.0	-0.5	29.4	45.0	25.6
Nonmetropolitan	0.0	0.9	0.3	2.3	33.2	48.4	18.4
Metropolitan	0.0	-0.2	-0.1	-0.9	28.8	44.4	26.8
By Carriers' Current Pay Localities, Budget-Neutral							
All Practices a/	0.0	0.3	0.1	0.5	26.9	48.5	24.5
Nonmetropolitan	0.0	0.8	0.3	2.6	33.2	46.6	20.1
Metropolitan	0.0	0.2	0.1	0.1	25.9	48.8	25.3
By State, Based on Cost Index b/							
All Practices a/	0.0	0.1	0.0	0.0	31.8	39.4	28.8
Nonmetropolitan	12.9	6.4	2.3	-0.5	36.7	43.5	19.8
Metropolitan	-1.9	-0.8	-0.3	0.1	31.0	38.7	30.3
By State and Urban/Rural, Based on Cost Index b/							
All Practices a/	0.0	0.2	0.1	0.3	32.6	40.4	27.0
Nonmetropolitan	0.4	1.4	0.5	3.5	34.3	43.8	21.9
Metropolitan	-0.1	0.0	0.0	-0.2	32.3	39.8	27.9
By Carriers' Current Pay Localities, Based on Cost Index b/							
All Practices	0.0	0.2	0.1	0.3	33.6	37.8	28.6
Nonmetropolitan	1.5	1.8	0.6	3.9	36.7	42.4	20.8
Metropolitan	-0.2	0.0	0.0	-0.2	33.0	37.0	30.0

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Using the prospective payment system (PPS) hospital wage index.

TABLE B-11. ALTERNATIVE LOCATION-SPECIFIC MULTIPLIERS, FOR A FEE SCHEDULE WITH SPECIALTY-SPECIFIC MULTIPLIERS

Physician Practices by Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Nationwide, Budget-Neutral							
All Practices a/	0.0	0.7	0.2	2.0	40.3	30.3	29.4
Nonmetropolitan	22.1	11.6	4.1	-1.8	62.9	25.8	11.3
Metropolitan	-3.2	-0.9	-0.3	2.6	36.5	31.1	32.4
By State, Budget-Neutral							
All Practices a/	0.0	0.1	0.0	0.3	36.1	39.9	24.0
Nonmetropolitan	8.7	4.9	1.7	1.1	45.9	36.4	17.7
Metropolitan	-1.3	-0.6	-0.2	0.2	34.5	40.4	25.1
By State and Urban/Rural, Budget-Neutral							
All Practices a/	0.0	0.2	0.1	0.5	34.3	41.9	23.9
Nonmetropolitan	0.0	1.1	0.4	2.0	41.0	43.8	15.2
Metropolitan	0.0	0.0	0.0	0.3	33.2	41.5	25.3
By Carriers' Current Pay Localities, Budget-Neutral							
All Practices a/	0.0	0.4	0.2	1.3	31.8	45.4	22.8
Nonmetropolitan	0.0	1.0	0.4	2.5	39.2	42.8	18.0
Metropolitan	0.0	0.4	0.1	1.1	30.6	45.8	23.6
By State, Based on Cost Index b/							
All Practices a/	0.0	0.5	0.2	1.5	36.9	36.1	27.0
Nonmetropolitan	14.8	7.8	2.8	-0.5	45.9	34.6	19.4
Metropolitan	-2.1	-0.6	-0.2	1.8	35.4	36.4	28.3
By State and Urban/Rural, Based on Cost Index b/							
All Practices a/	0.0	0.6	0.2	1.7	37.2	37.6	25.3
Nonmetrpolitan	2.3	2.7	0.9	3.3	43.5	35.7	20.8
Metropolitan	-0.3	0.3	0.1	1.5	36.1	37.9	26.0
By Carriers' Current Pay Localities, Based on Cost Index b/							
All Practices a/	0.0	0.6	0.2	1.7	36.8	37.9	25.4
Nonmetropolitan	3.4	3.2	1.1	3.6	44.9	36.7	18.4
Metropolitan	-0.5	0.2	0.1	1.5	35.4	38.0	26.5

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Using the prospective payment system (PPS) hospital wage index.

TABLE B-12. ALTERNATIVE LOCATION-SPECIFIC MULTIPLIERS, FOR A PARTIAL FEE SCHEDULE, PROCEDURES ONLY

Physician Practices by Location	Percent Change In				Percent of Practices for Which Medicare Allowed Amounts Would		
	Medicare Allowed Amounts	Revenue from Medicare Patients	Revenue from All Patients	Patients' Liabilities Per Service	Increase by 10 Percent or More	Change by Less Than 10 Percent	Fall by 10 Percent or More
Nationwide, Budget-Neutral							
All Practices a/	0.0	0.1	0.0	0.3	13.8	79.1	7.1
Nonmetropolitan	4.1	1.6	0.6	1.9	21.9	76.7	1.4
Metropolitan	-0.6	-0.1	0.0	0.1	12.4	79.6	8.0
By State, Budget-Neutral							
All Practices a/	0.0	-0.3	-0.1	-0.9	11.3	82.4	6.3
Nonmetropolitan	1.1	0.2	0.1	2.1	14.8	80.6	4.6
Metropolitan	-0.2	-0.4	-0.1	-1.3	10.7	82.7	6.6
By State and Urban/Rural, Budget-Neutral							
All Practices a/	0.0	-0.3	-0.1	-0.8	11.0	83.4	5.6
Nonmetropolitan	0.0	0.1	0.0	2.0	14.8	82.7	2.5
Metropolitna	0.0	-0.3	-0.1	-1.2	10.4	83.5	6.2
By Carriers' Current Pay Localities, Budget-Neutral							
All Practices a/	0.0	-0.1	0.0	-0.3	10.0	84.6	5.4
Nonmetropolitan	0.0	0.0	0.0	1.7	14.8	80.9	4.2
Metropolitan	0.0	-0.1	0.0	-0.6	9.2	85.3	5.6
By State, Based on Cost Index b/							
All Practices a/	0.0	-0.3	-0.1	-0.7	12.6	80.7	6.7
Nonmetropolitan	1.7	0.5	0.2	1.9	13.8	81.6	4.6
Metropolitan	-0.2	-0.4	-0.1	-1.1	12.4	80.5	7.1
By State and Urban/Rural, Based on Cost Index b/							
All Practices a/	0.0	-0.2	-0.1	-0.6	13.1	80.2	6.7
Nonmetropolitan	-2.9	-1.2	-0.4	3.5	15.2	79.2	5.7
Metropolitan	0.4	-0.1	0.0	-1.2	12.7	80.4	6.9
By Carriers' Current Pay Localities, Based on Cost Index b/							
All Practices a/	0.0	-0.1	0.0	-0.3	12.7	80.3	7.0
Nonmetropolitan	-2.7	-1.1	-0.4	3.6	14.8	79.5	5.7
Metropolitan	0.4	0.1	0.0	-0.9	12.3	80.5	7.2

SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

a. Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.

b. Using the prospective payment system (PPS) hospital wage index.

The proportion of practices for which revenues would change substantially, particularly if the change would be a loss of revenues, is one indicator of how disruptive a fee schedule would be. One striking finding in this section is seen by reading down the last column in the tables, showing the percent of practices that would lose 10 percent or more in allowed amounts as a result of the payment change considered. If a nationwide fee schedule with no specialty differentials were implemented, about 30 percent of practices would lose 10 percent or more. If payment rates were adjusted by location, the proportion of practices so affected would fall, but not by much, indicating that variation in fees is nearly as large within as across geographic areas. Even if payment rates varied for every pay locality and were set to be budget-neutral for each of them, nearly 24 percent of practices would lose 10 percent or more in allowed amounts (see Table B-9). The same results would occur for each of the other two specialty alternatives under a full fee schedule (see Tables B-10 and B-11). The proportion of practices losing 10 percent or more in allowed amounts would be much smaller under a partial fee schedule, because all the effects from this alternative are small (see Table B-12). Under any of the alternatives, the impact on practice revenues from Medicare patients and from all patients would be much smaller than the effects on allowed amounts.

SUMMARY OF FINDINGS

This section summarizes some of the findings for alternative fee schedules, and presents some figures that facilitate comparison of the likely impact on practice receipts. It also discusses the impact on patients' liabilities.

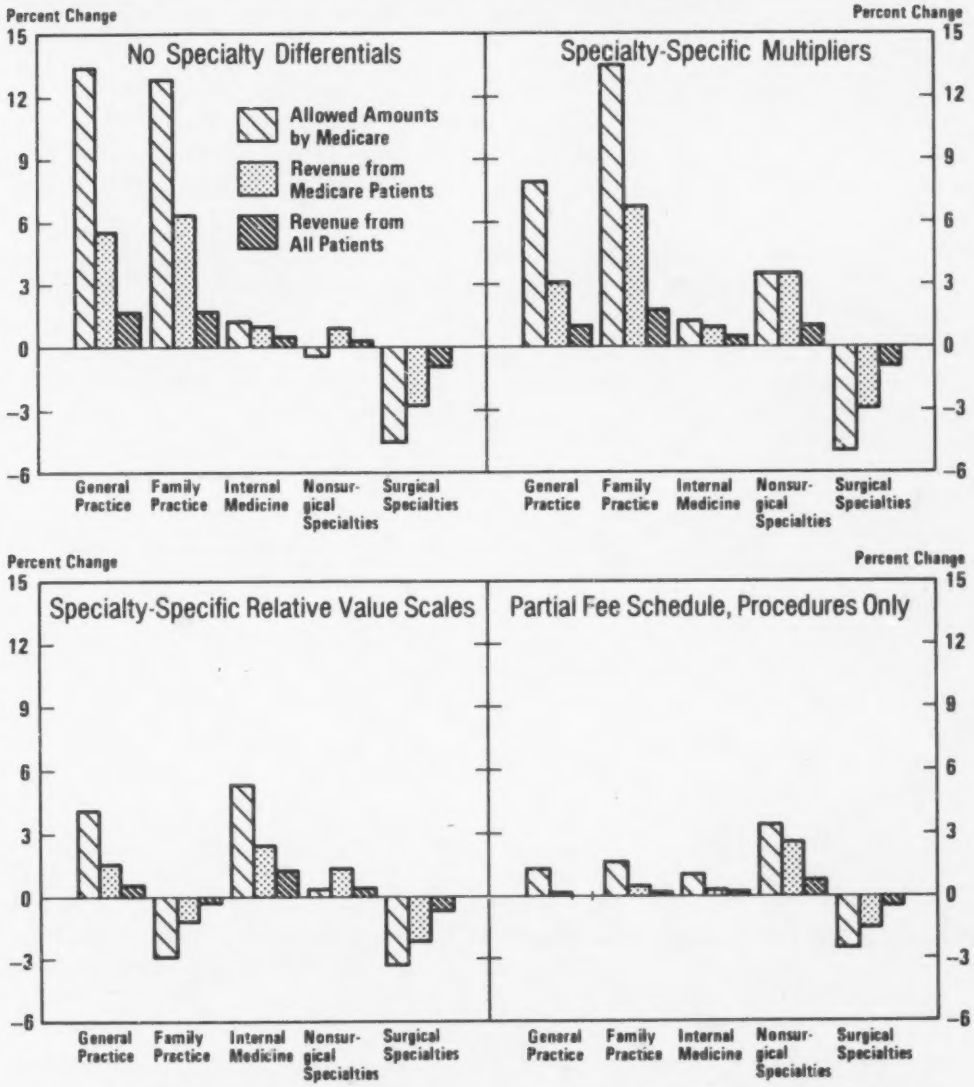
Effects on Practice Receipts

Under each of the fee schedule alternatives examined here, practice receipts for generalists (as a group) and for nonsurgical specialists would increase, while receipts for surgical specialists would fall, on average nationwide. Among generalists, gains for general and family practitioners would usually be larger than for internists. The one exception to this would occur under a fee schedule with specialty-specific RVSs, where internists would gain more than general practitioners and where family practitioners would lose revenues, for reasons explained earlier (see Figure B-1).

The general direction of these effects would be desirable if it were thought that surgical services were reimbursed too generously relative to payments for primary care, as is often asserted. Some of the fee schedule options examined here, however, could result in payment rates per unit of

Figure B-1.

Percent Change in Practice Receipts After Implementing Statewide Budget-Neutral Fee Schedules, by Physician Specialty



SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

time for general and family practitioners that were higher than rates paid to internists, because of differences among the specialty groups in the average length of visits of a given type. If visit codes were redefined to reflect time, receipts for general and family practitioners would likely increase far less under these options, while receipts for internists would increase more.

Except for the alternatives that would establish payment rates that were budget-neutral for areas within each state, the full fee schedule options examined here would increase practice receipts in nonmetropolitan areas appreciably, offset by small reductions in practice receipts in metropolitan areas. (See Figure B-2, which shows allowed amounts. The pattern would be similar for revenues from Medicare patients or from all patients, although the size of the effects would be much smaller.) These results also would be desirable if, as is widely believed, current payment rates do not adequately account for the costs of rural practice and the relative undersupply of physicians in such areas.

About one in four practices nationwide would face a drop of 10 percent or more in allowed amounts if any of the full fee schedule options examined here were implemented, so that the potential for disruption could be significant. The impact on practice revenues from Medicare patients would be substantially smaller, though, because practice revenues would not change at all for unassigned claims. Further, the impact on practice revenues from all patients would be very small, on average, because non-Medicare patients account for 80 percent of practice revenues overall. For about 20 percent of practices, however, Medicare patients account for 50 percent or more of the patient load, and implementation of a Medicare fee schedule could be quite disruptive for these practices. 13/

Effects on Patients' Liabilities

Because the data base used for the analysis is a sample of physician practices and not of Medicare enrollees, no assessment of the impact of alternative options on enrollees' total liabilities could be made. Instead, results presented show the impact on average liability per service. Patient liabilities were defined to include not only deductible and coinsurance amounts on Medicare's approved charges, but also balance-billing amounts on unassigned claims.

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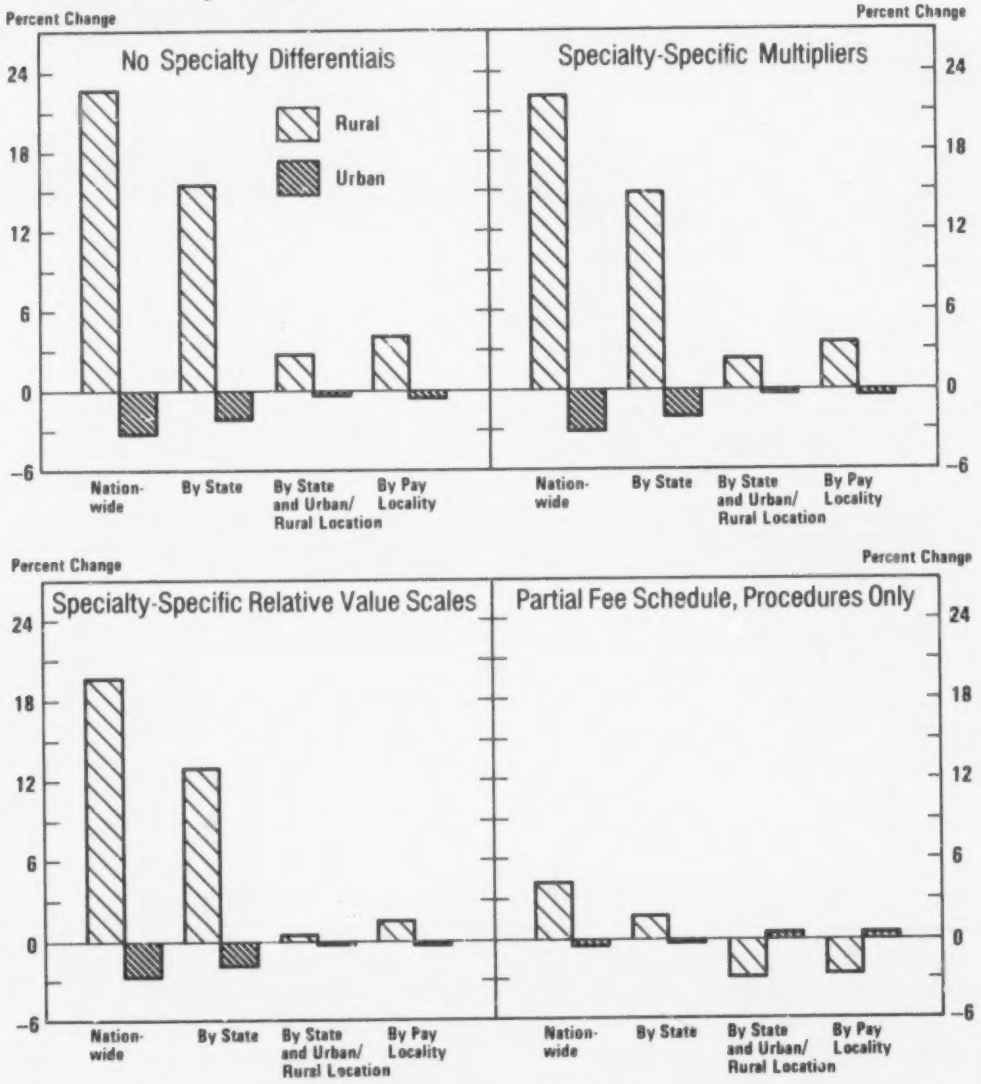
13. Congressional Budget Office tabulations from HCFA's latest survey of Physicians' Practice Costs and Income, for income year 1983.

Figure B-2.
Percent Change in Allowed Amounts After Implementing Fee Schedules Using Location-Specific Multipliers Based on Costs, All Practices by Location



SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

The average liability per service currently is $15; changes in this amount under the options examined here would be small. Increases in liability, which are probably of more concern than reductions, would in no instance exceed 4 percent. This is an average, however, and the impact on patients for specific services could be larger. Further, these results assume that physicians' assignment decisions would be unchanged despite a change in payment rates, and this assumption would not be valid in all cases.

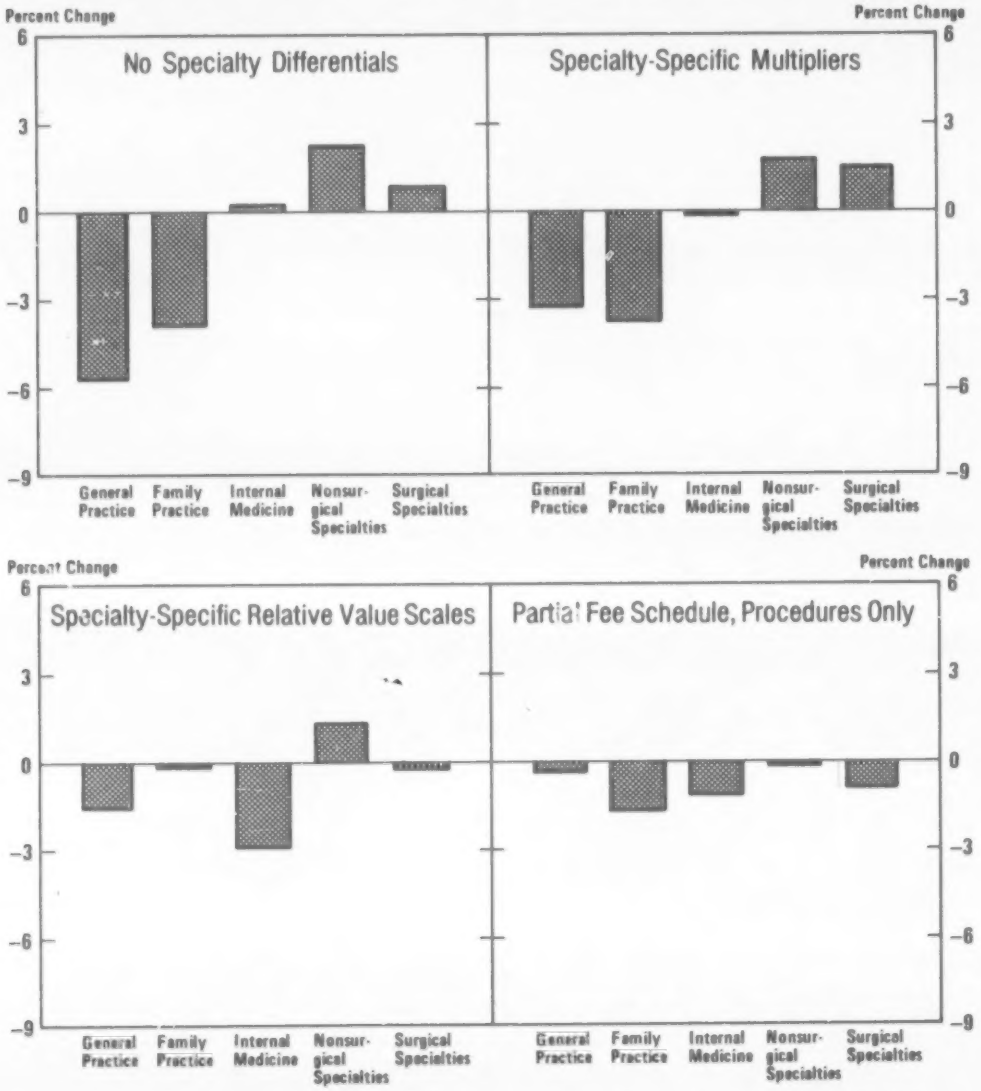
Under all the specialty alternatives examined here, patients' liabilities would be reduced for the services provided by generalists, while they would generally be increased or nearly unchanged for the services provided by nonsurgical and surgical specialists (see Figure B-3). Each of these effects would probably be larger if assignment rates changed, because the likely changes would be increased assignment by generalists (whose payment rates would increase) and reduced assignment by specialists (whose payment rates would fall).

On average nationwide, patients' liabilities would generally increase slightly regardless of the specialty variant used or the way in which location-specific multipliers were set. One exception to this would occur under a partial fee schedule, for procedures only. In this instance, patients' liabilities would fall, on average nationwide, so long as payment rates varied by state or some smaller geographic area.

The changes in patients' liabilities would typically be smaller for alternatives that would set budget-neutral multipliers by location (Figure B-4), compared with alternatives that would set location-specific multipliers based on costs (Figure B-5). For the budget-neutral alternatives, patients' liabilities would in no case increase by more than 3 percent. For the cost-based alternatives, increases of nearly 4 percent would occur in some instances.

Another difference between alternatives using location-specific, budget-neutral multipliers and those using cost-based multipliers would occur for statewide (full) fee schedules. Using budget-neutral multipliers to set statewide payment rates, patients' liabilities in nonmetropolitan areas would increase under each specialty variant. If cost-based multipliers were used instead, patients' liabilities would fall in nonmetropolitan areas. These effects would occur because physicians' payment rates in nonmetropolitan areas would increase by more under cost-based statewide fee schedules than under fee schedules that were budget-neutral by state. Assignment rates are relatively low in nonmetropolitan areas, and higher payment rates in such areas would reduce patients' liabilities by reducing the balance-billing amounts they would have to pay.

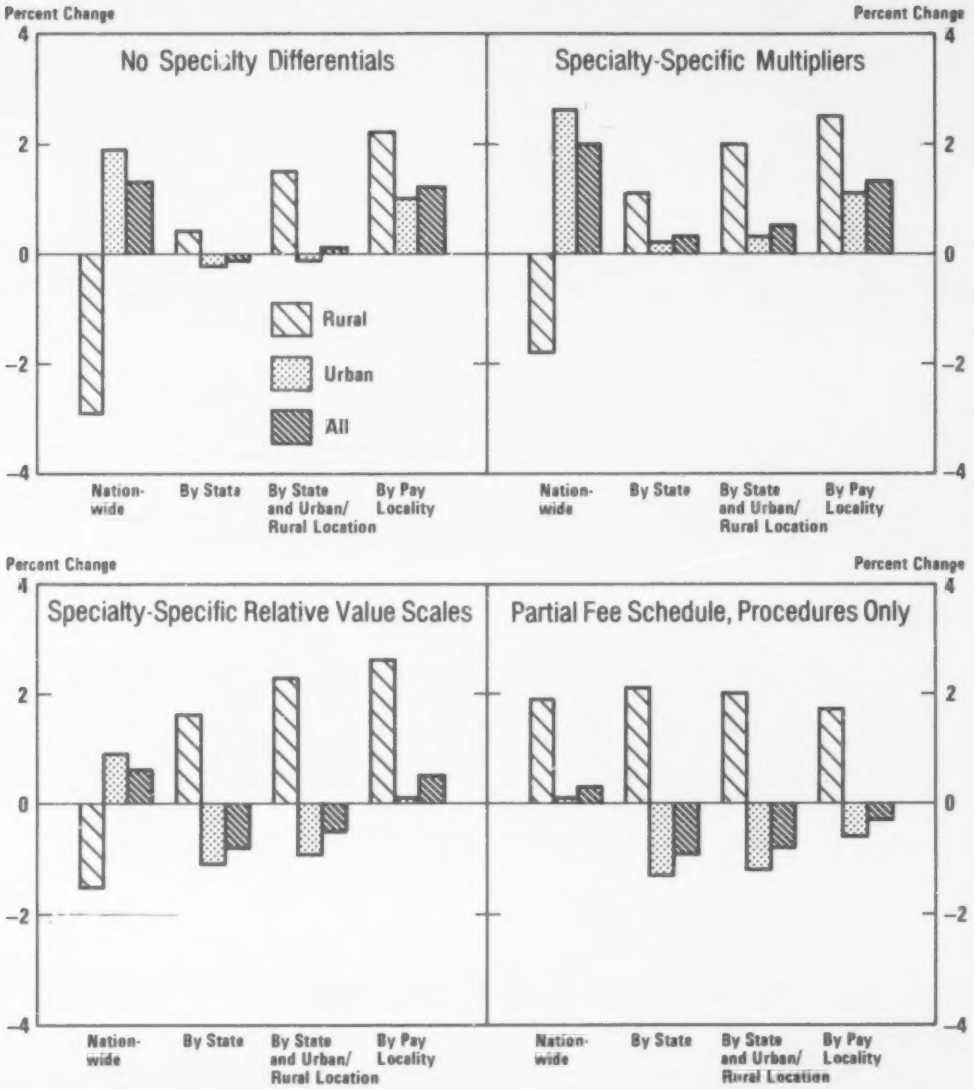
Figure B-3.
Percent Change in Patients' Liabilities Per Service After Implementing Statewide Budget-Neutral Fee Schedules, by Physician Specialty



SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

Figure B-4.

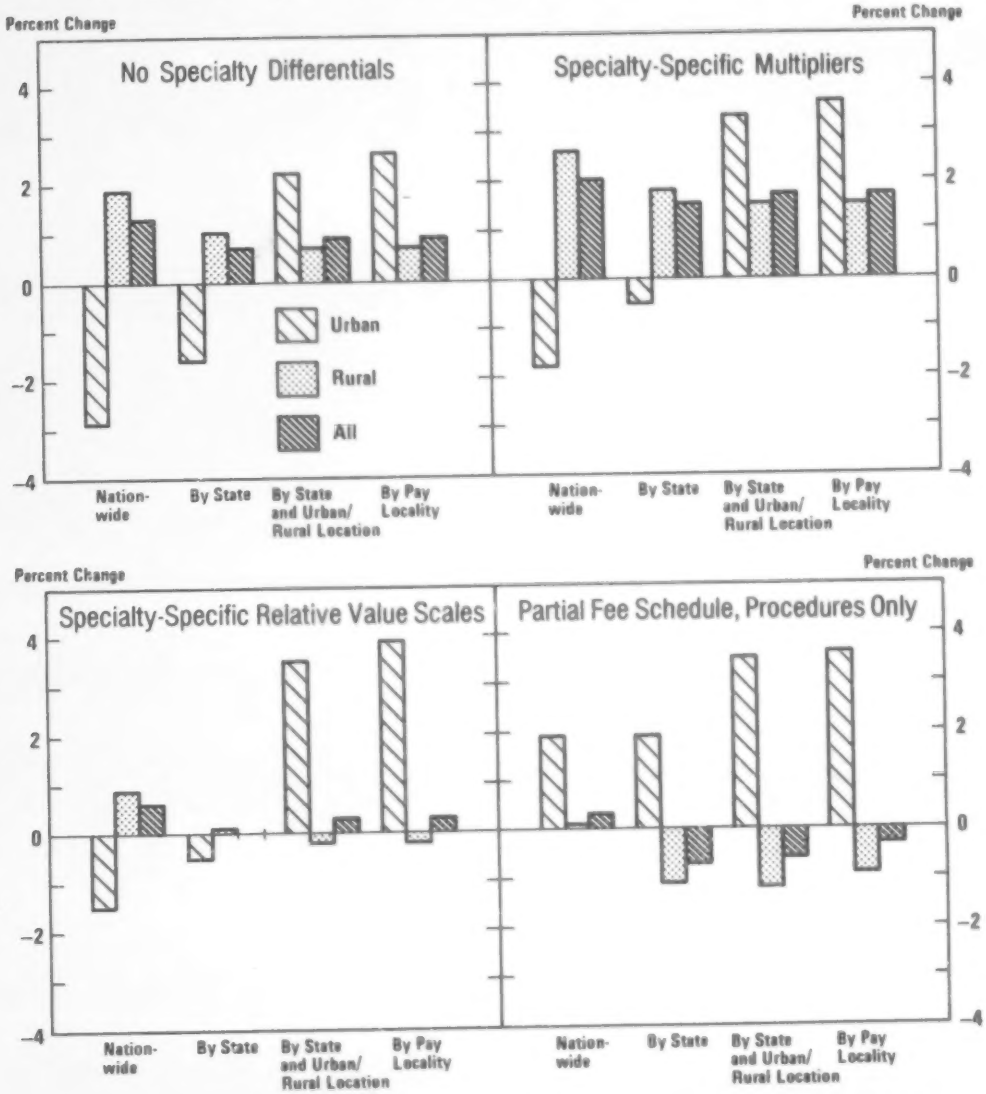
Percent Change in Patients' Liabilities Per Service After Implementing Fee Schedules Using Budget-Neutral Multipliers, by Location



SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

Figure B-5.

Percent Change in Patients' Liabilities Per Service After Implementing Fee Schedules Using Multipliers Based on Costs, by Location



SOURCE: Congressional Budget Office simulations from the Health Care Financing Administration's 1984 Part B Medicare Annual Data Provider file.

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